

Appendix data

1. Maximum Peak Output Power

1.1 Test Result

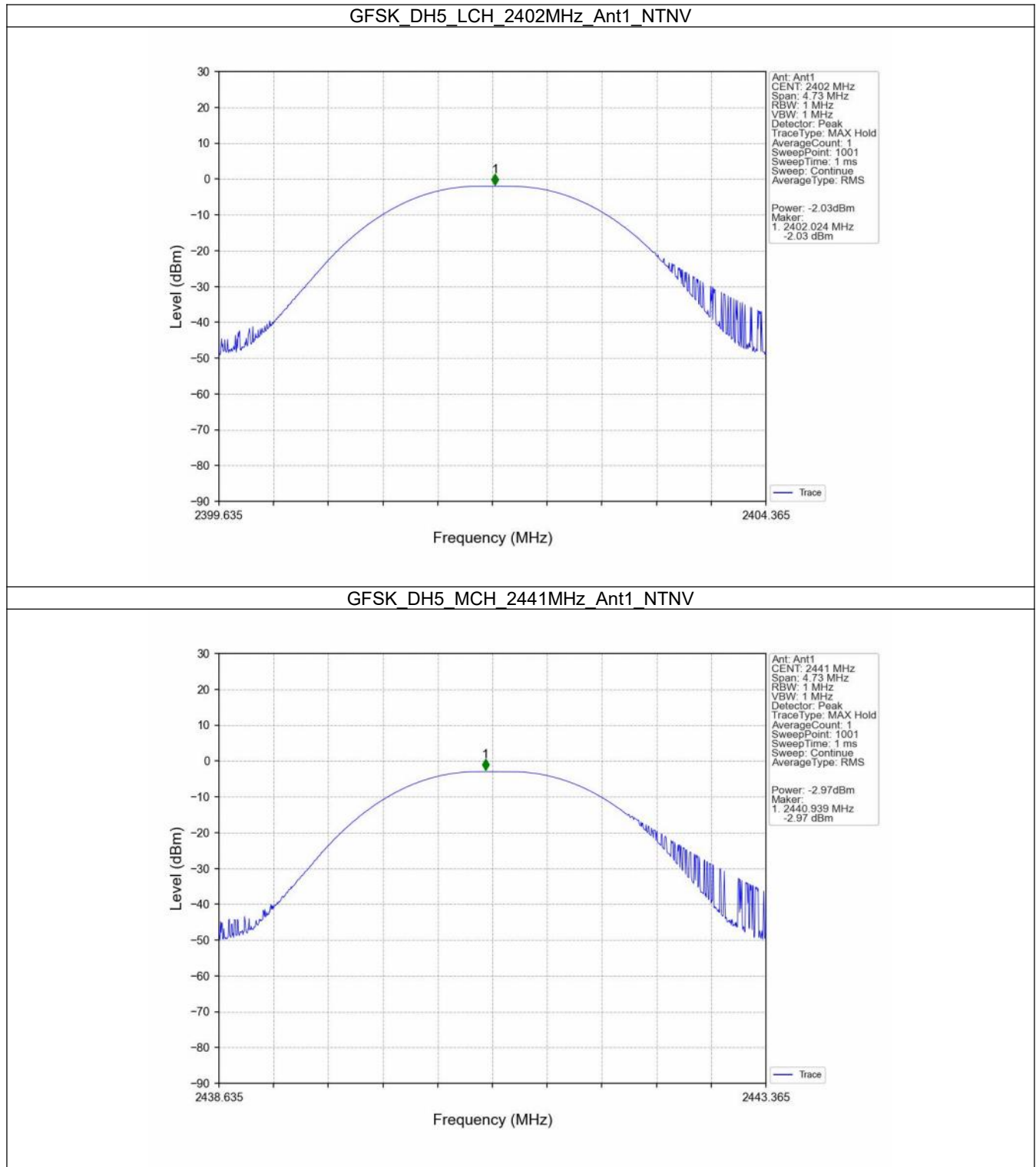
1.1.1 Power

Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				ANT1	Limit	
GFSK	SISO	2402	DH5	-2.03	<=30	Pass
		2441	DH5	-2.97	<=30	Pass
		2480	DH5	-3.87	<=30	Pass
Pi/4DQPSK	SISO	2402	2DH5	-1.98	<=20.97	Pass
		2441	2DH5	-2.94	<=20.97	Pass
		2480	2DH5	-3.84	<=20.97	Pass
8DPSK	SISO	2402	3DH5	-1.98	<=20.97	Pass
		2441	3DH5	-2.94	<=20.97	Pass
		2480	3DH5	-3.85	<=20.97	Pass

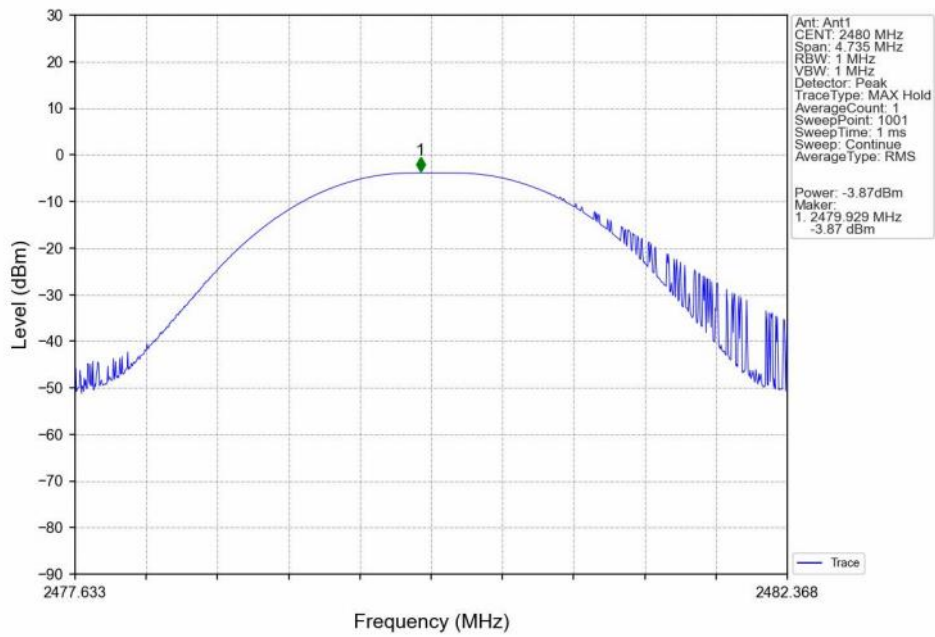
Note1: Antenna Gain: Ant1: 2.41dBi;

1.2 Test Graph

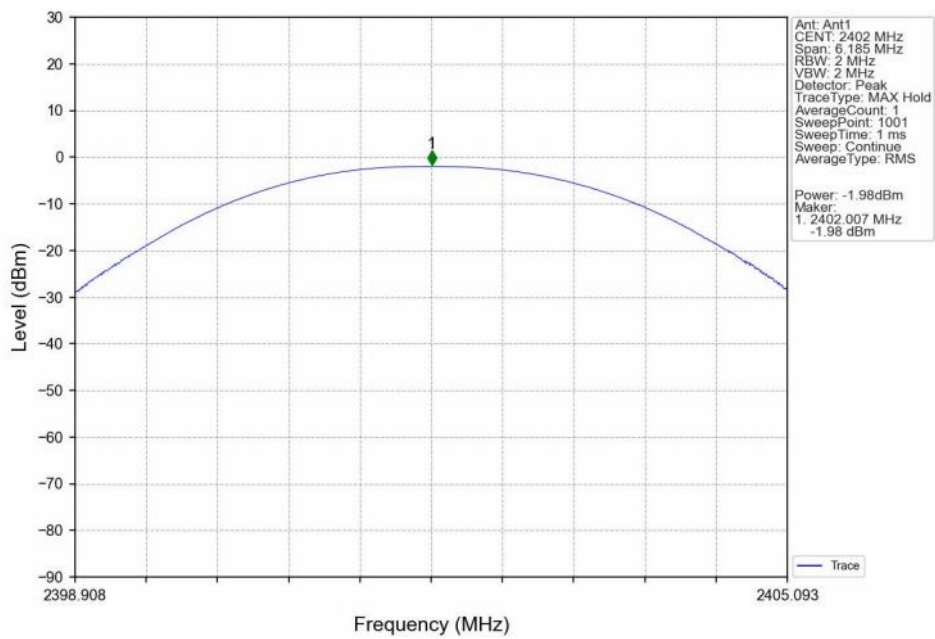
1.2.1 Power



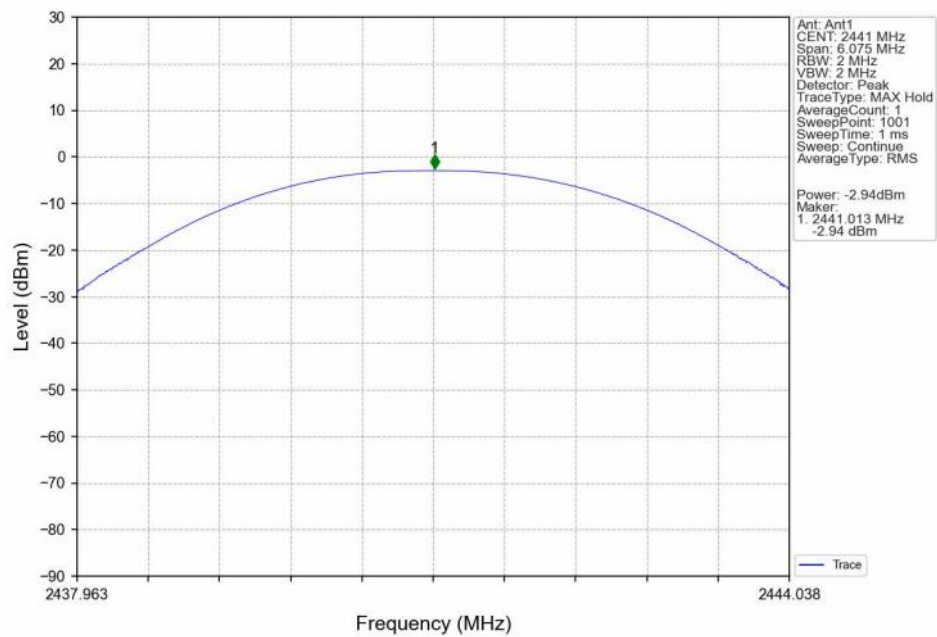
GFSK DH5 HCH 2480MHz Ant1 NTN



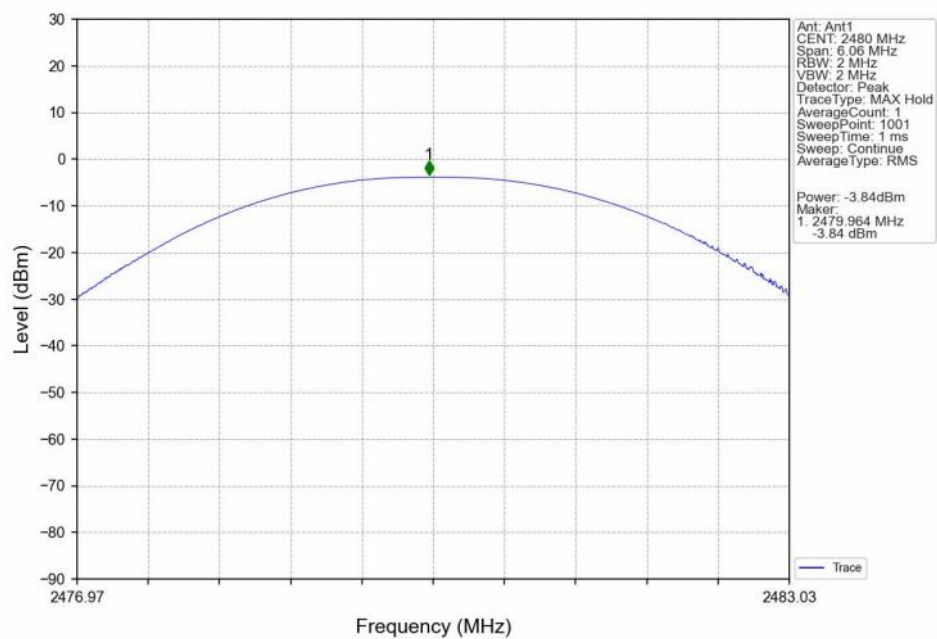
Pi/4DQPSK 2DH5 LCH 2402MHz Ant1 NTN



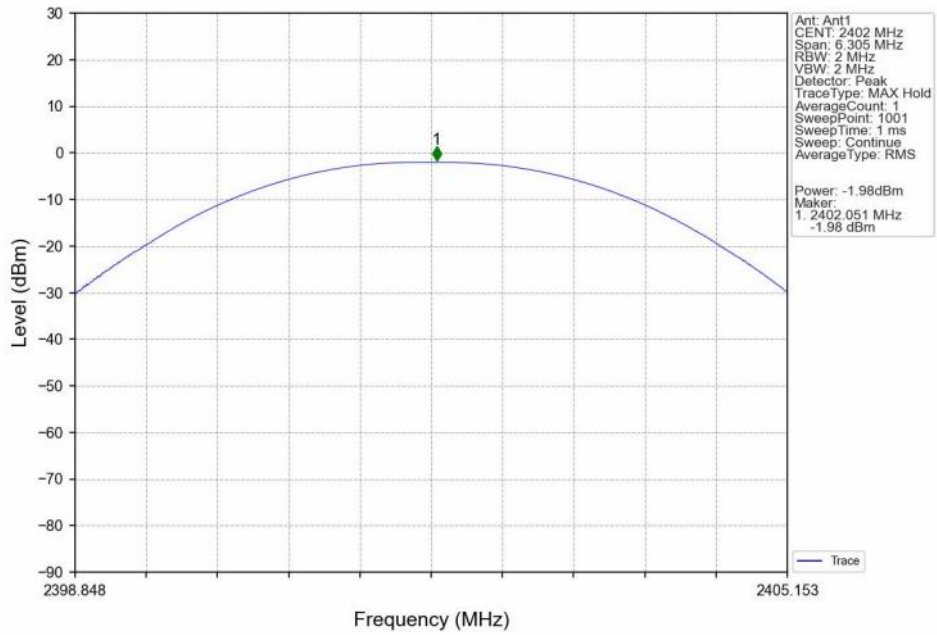
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



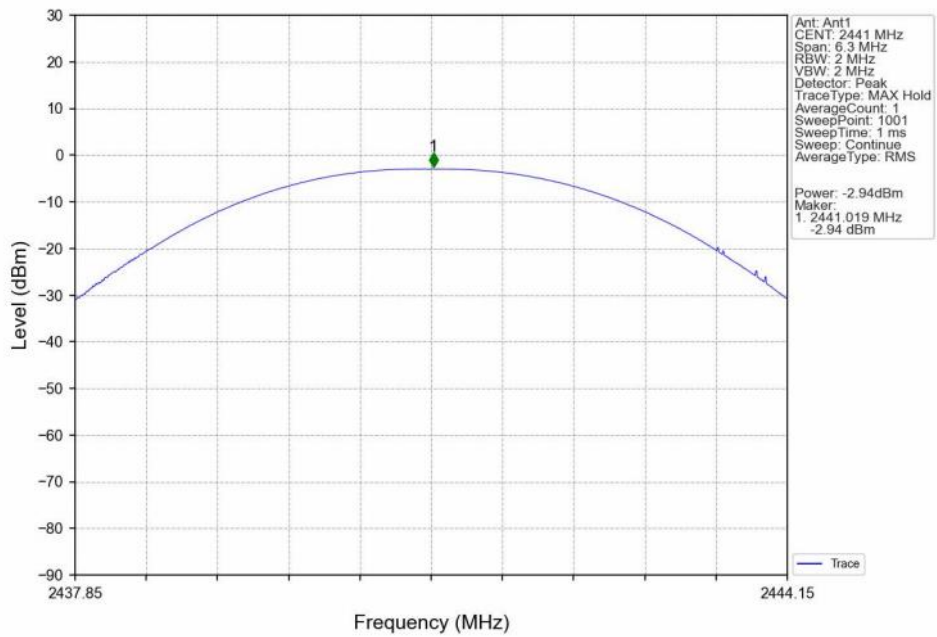
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



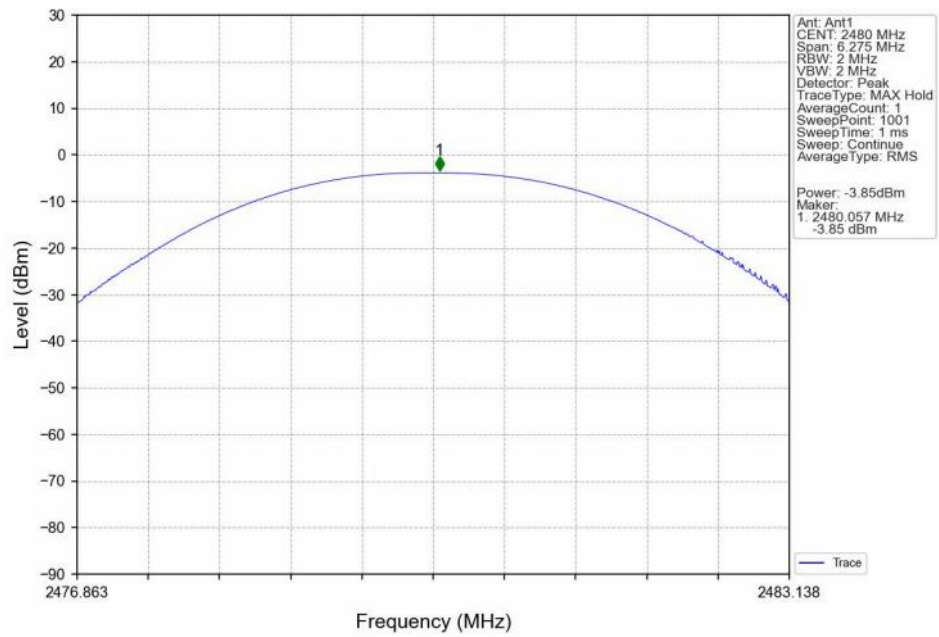
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



2. -20 dB Bandwidth Measurement

2.1 Test Result

2.1.1 OBW

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	99% Occupied Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2402	DH5	1	0.830	/	Pass
		2441	DH5	1	0.836	/	Pass
		2480	DH5	1	0.831	/	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.120	/	Pass
		2441	2DH5	1	1.117	/	Pass
		2480	2DH5	1	1.116	/	Pass
8DPSK	SISO	2402	3DH5	1	1.133	/	Pass
		2441	3DH5	1	1.125	/	Pass
		2480	3DH5	1	1.127	/	Pass

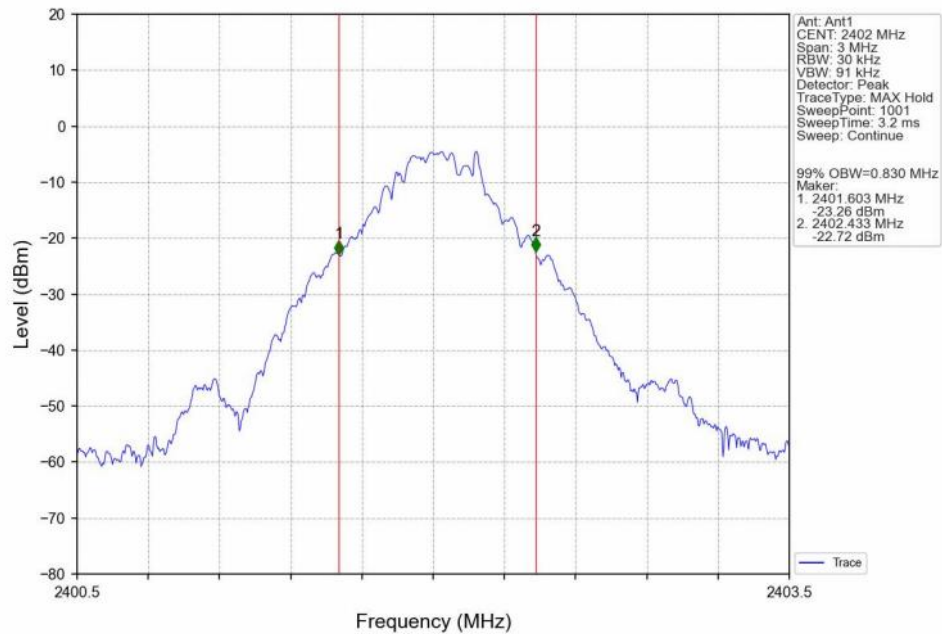
2.1.2 20dB BW

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	20dB Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2402	DH5	1	0.946	/	Pass
		2441	DH5	1	0.946	/	Pass
		2480	DH5	1	0.947	/	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.256	/	Pass
		2441	2DH5	1	1.221	/	Pass
		2480	2DH5	1	1.229	/	Pass
8DPSK	SISO	2402	3DH5	1	1.269	/	Pass
		2441	3DH5	1	1.250	/	Pass
		2480	3DH5	1	1.258	/	Pass

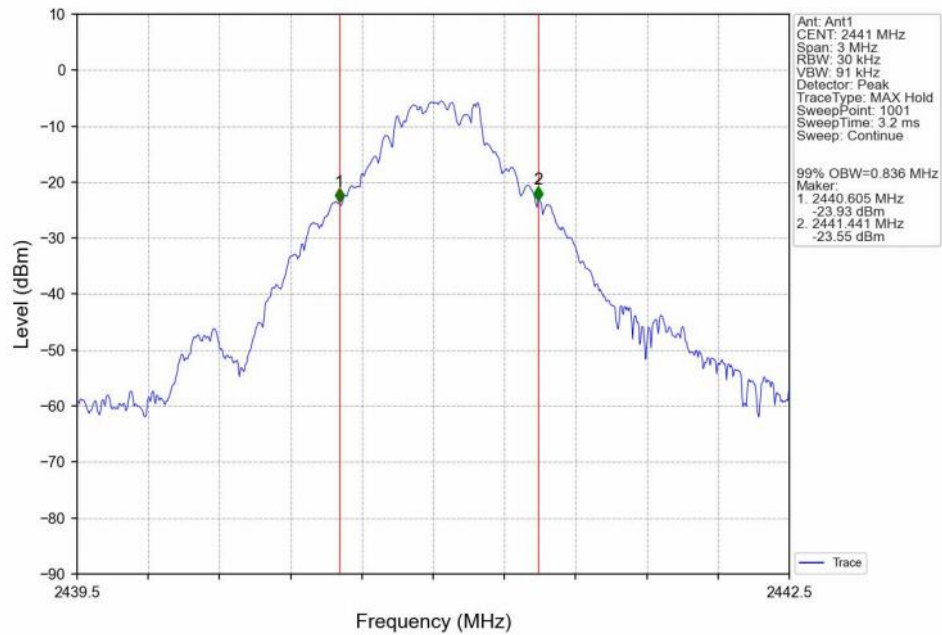
2.2 Test Graph

2.2.1 OBW

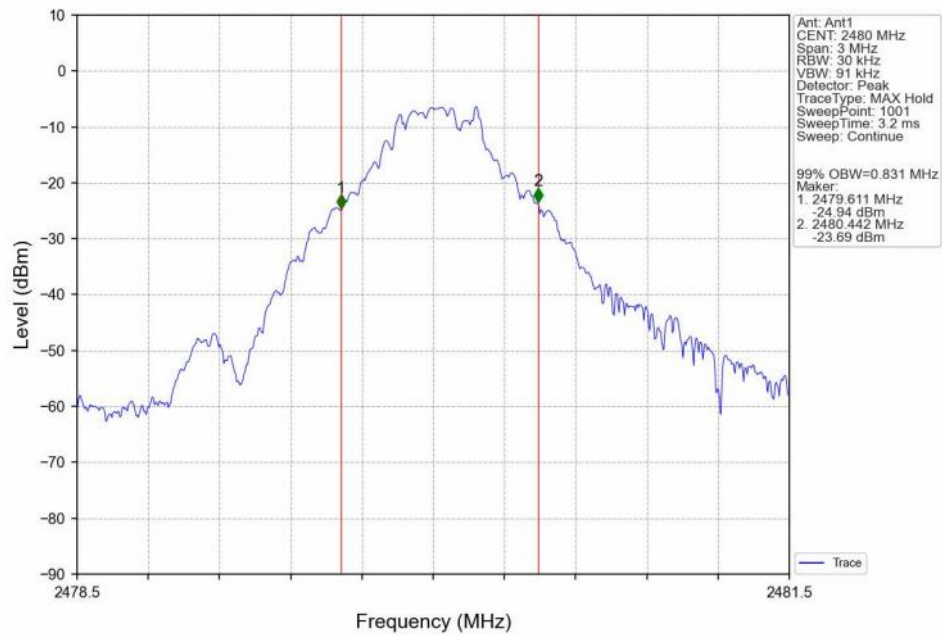
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



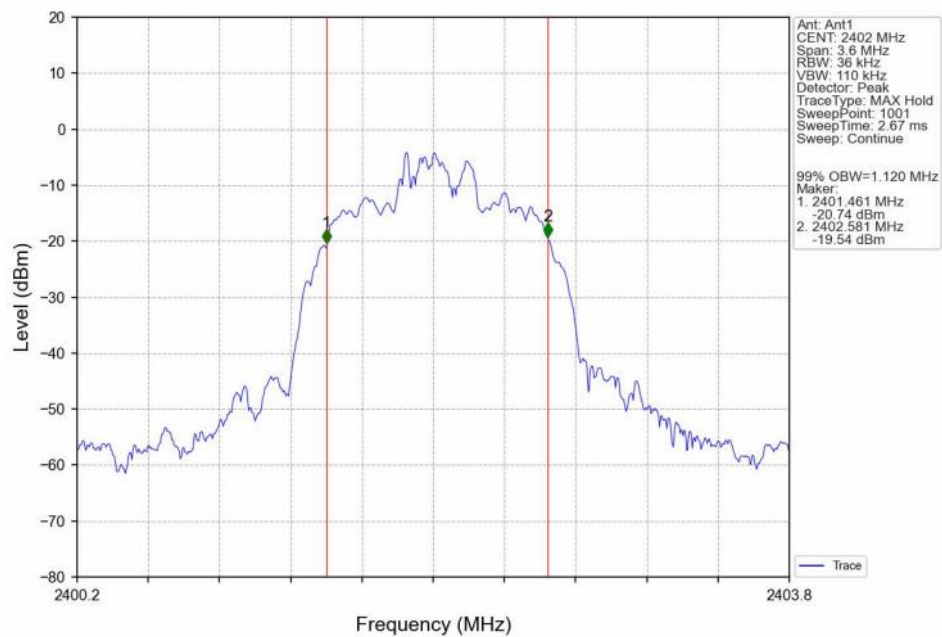
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



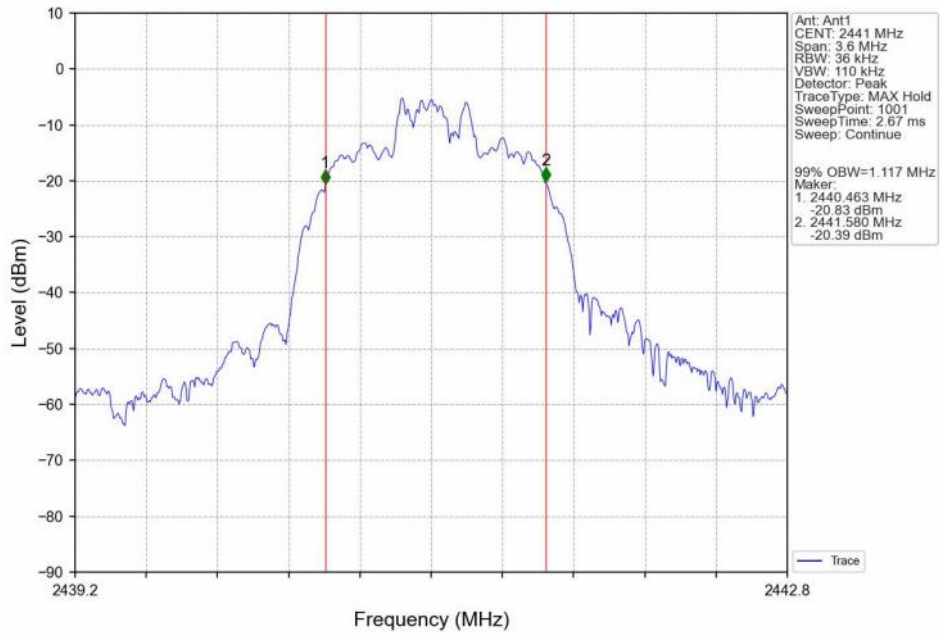
GFSK DH5_HCH_2480MHz_Ant1_NTNV



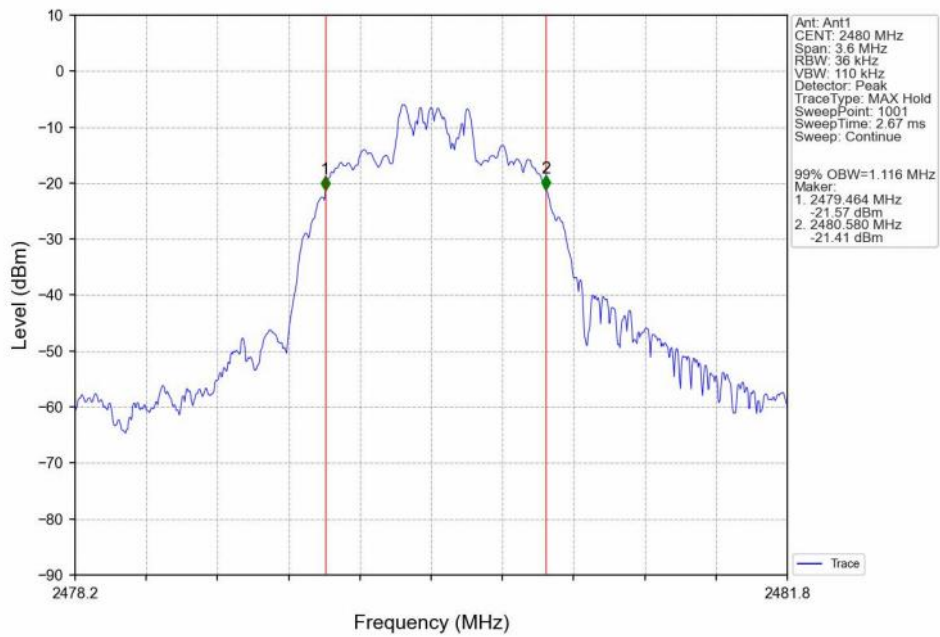
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



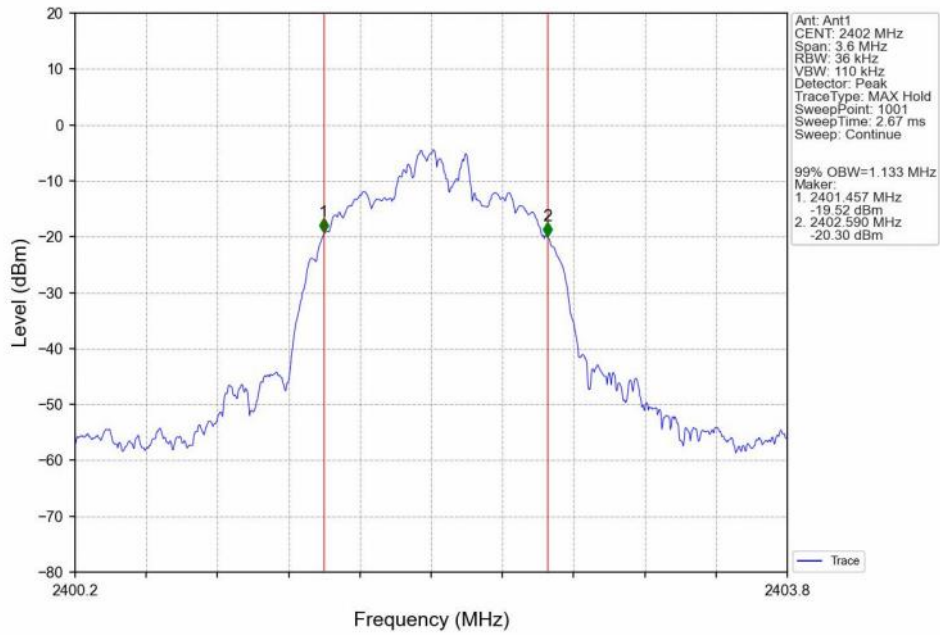
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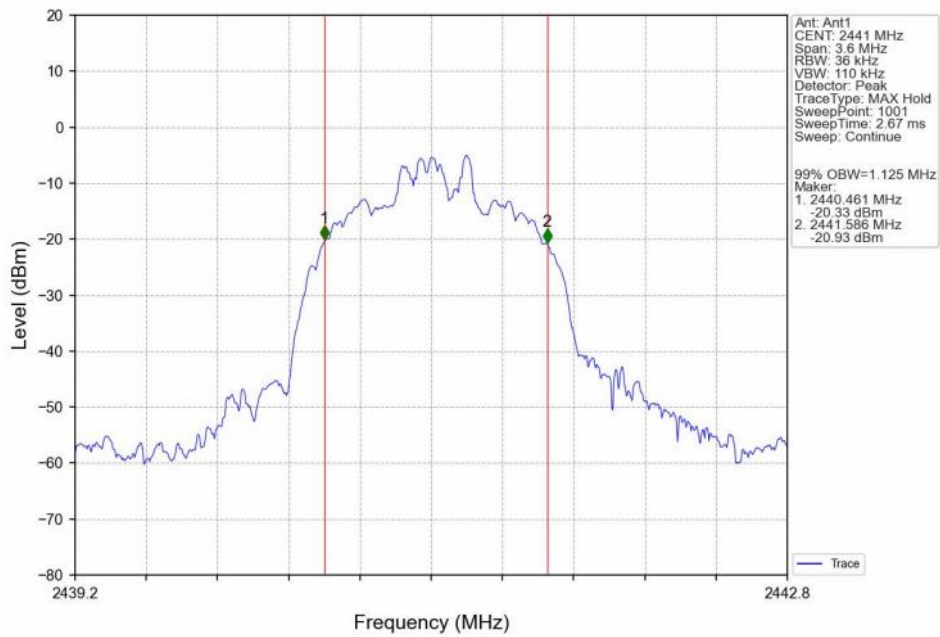
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



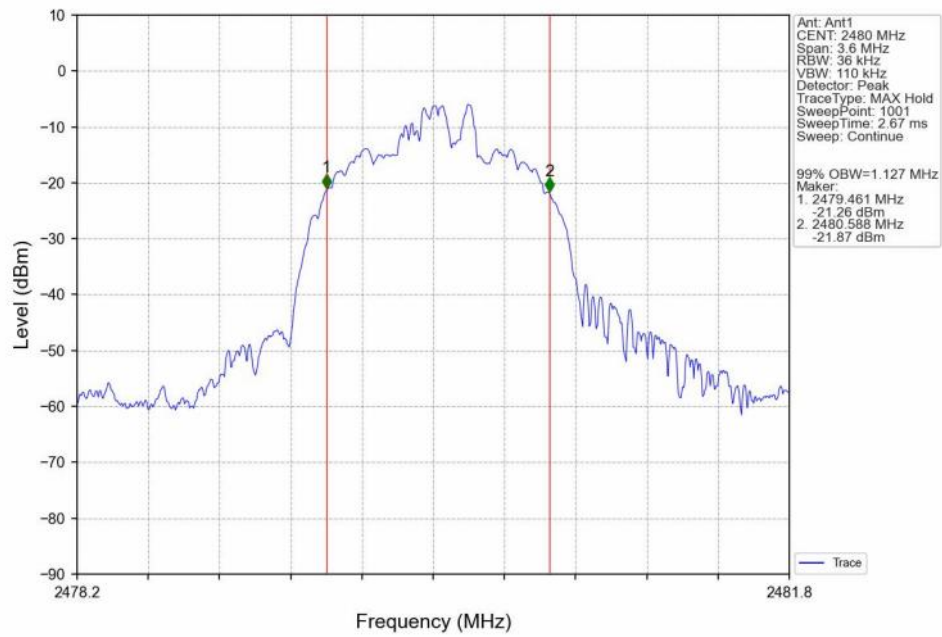
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



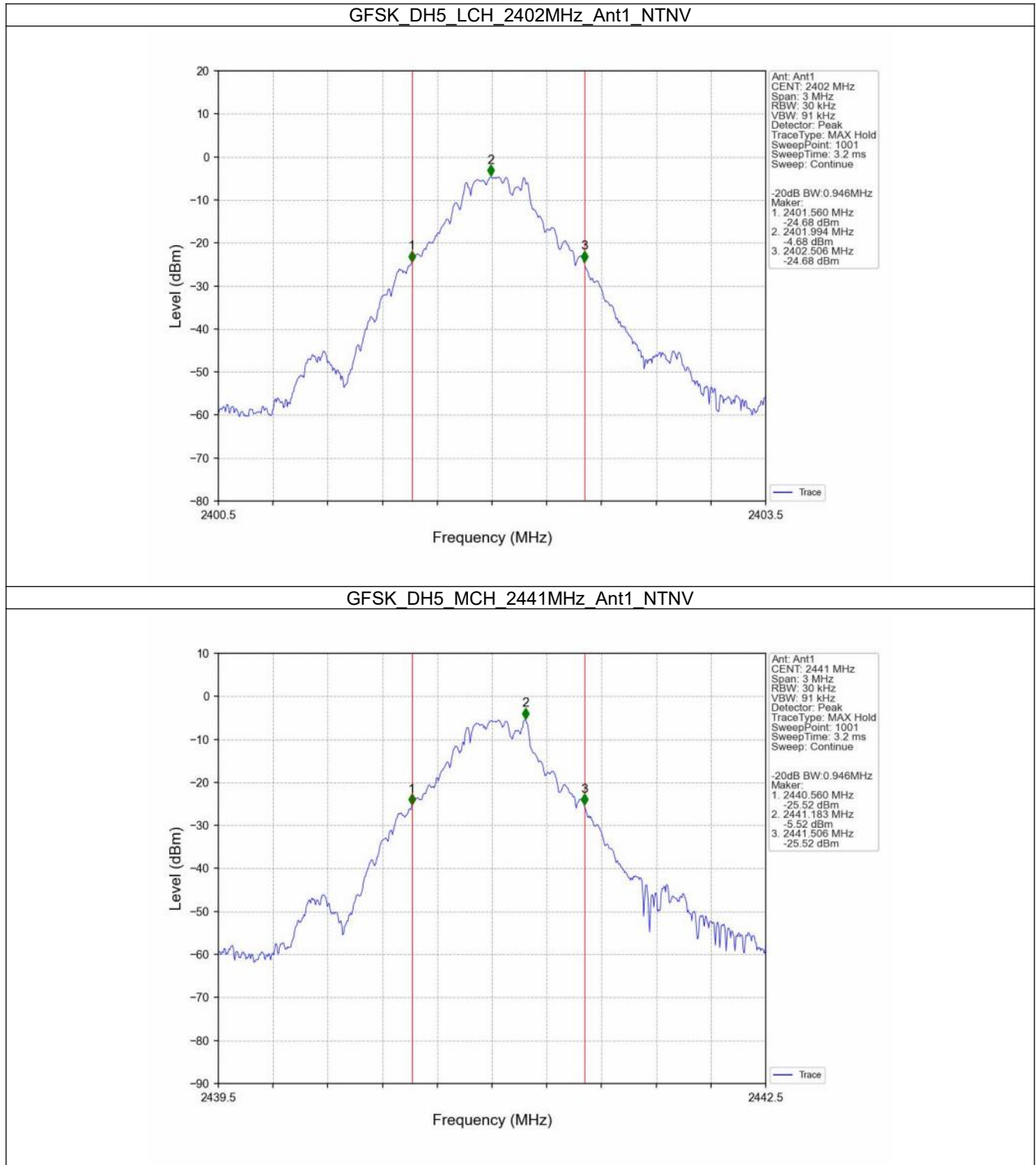
8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



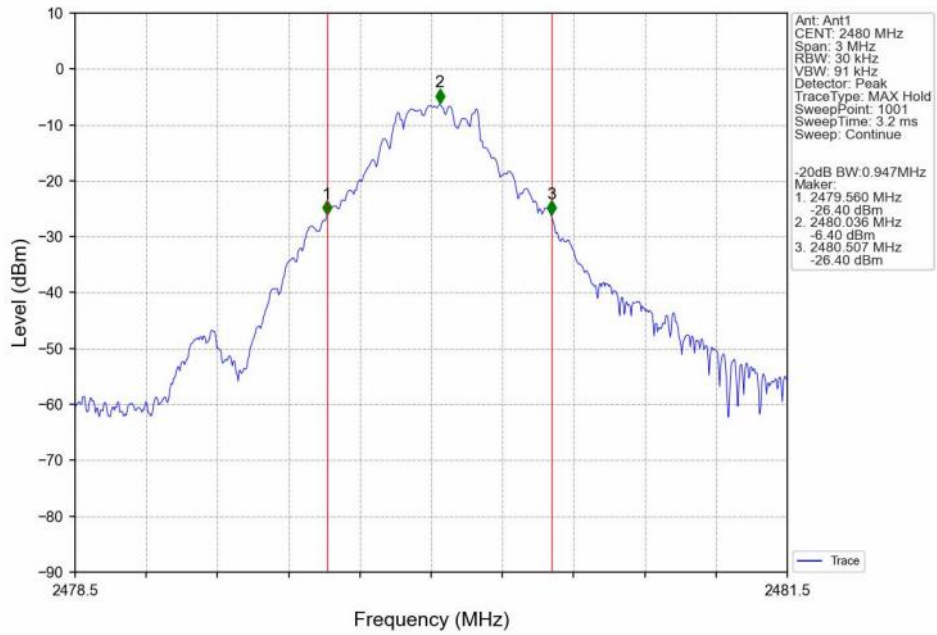
8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



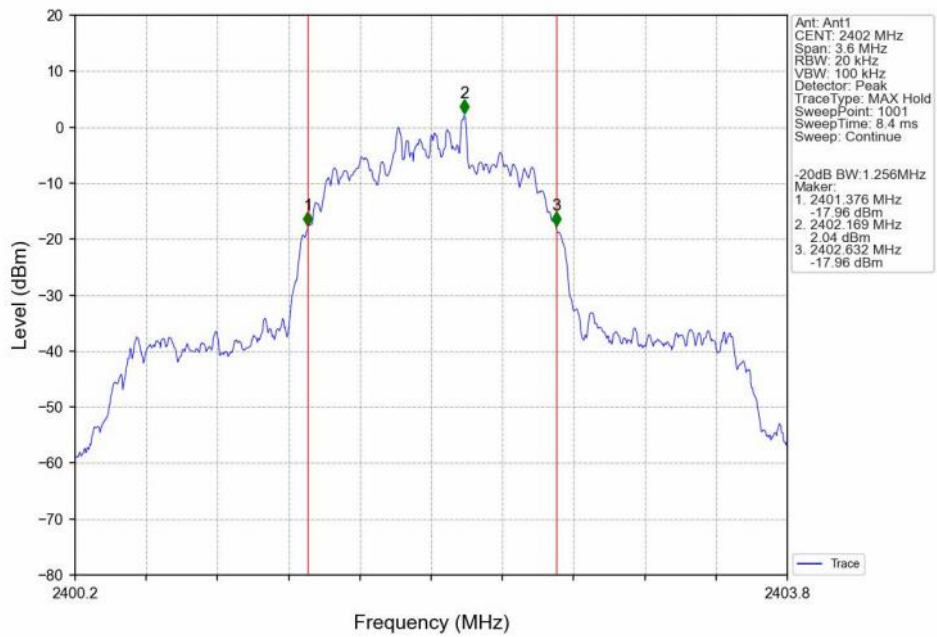
2.2.2 20dB BW



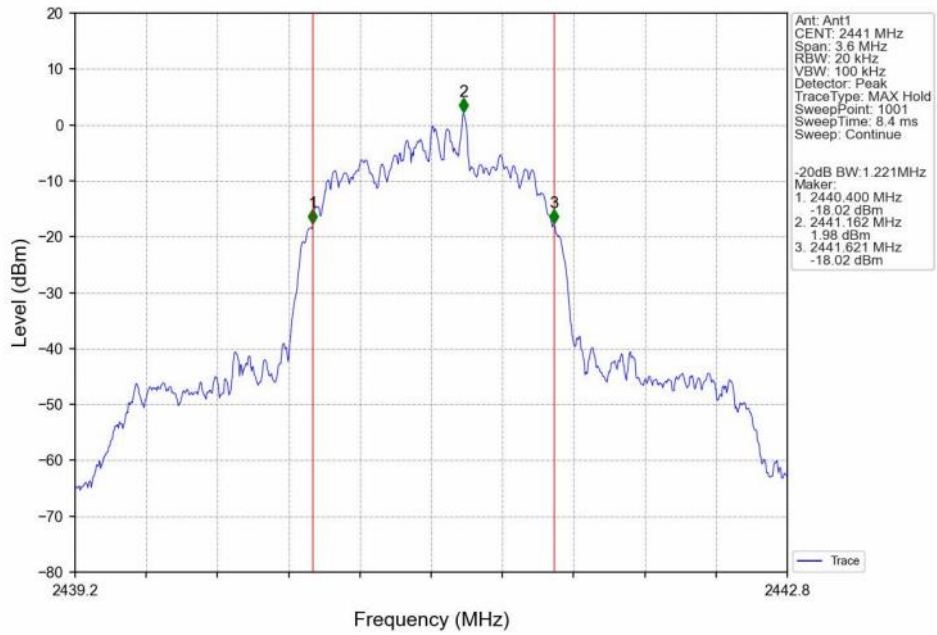
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



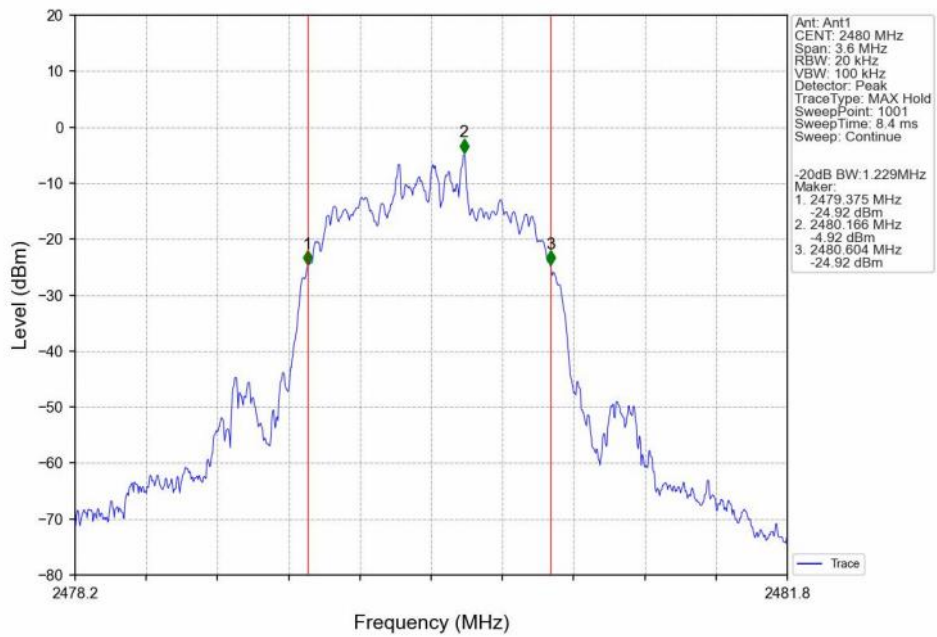
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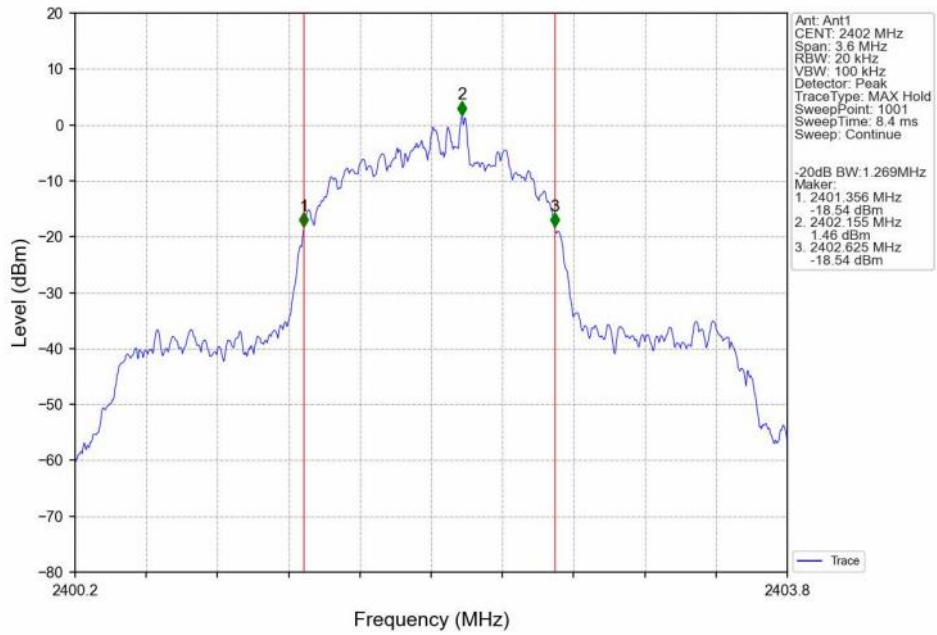
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



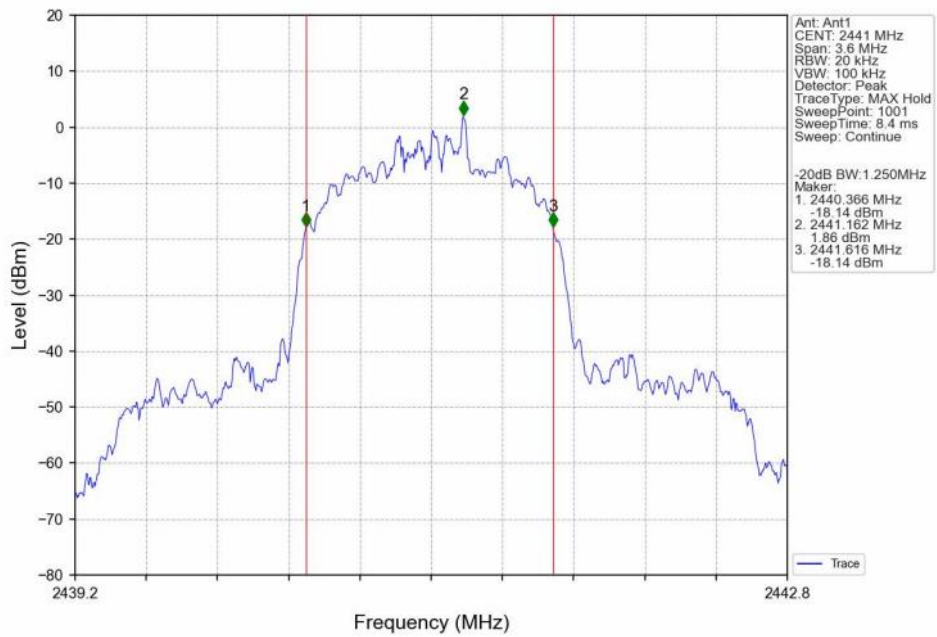
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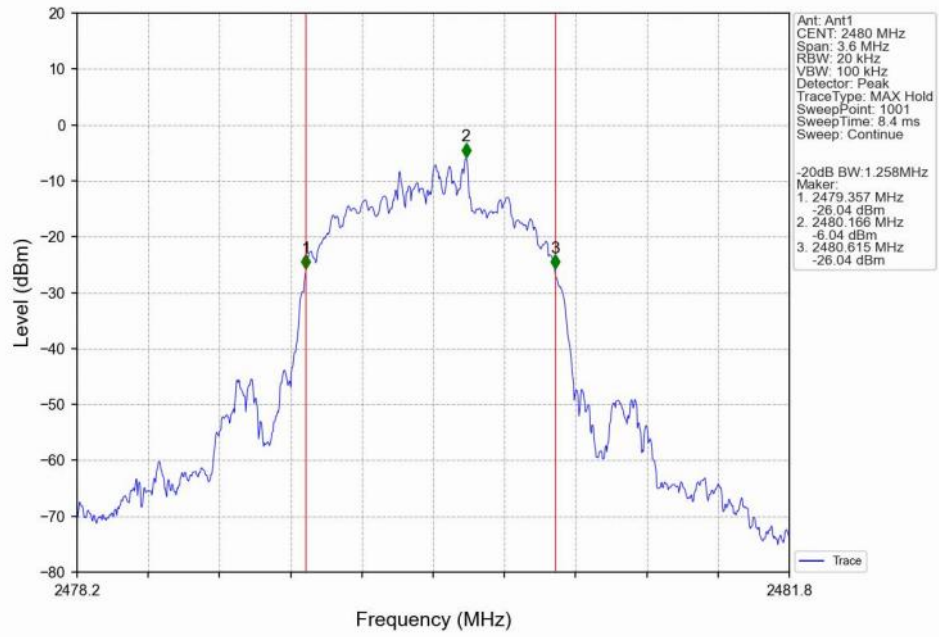
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



3. Carrier Frequency Separation Test

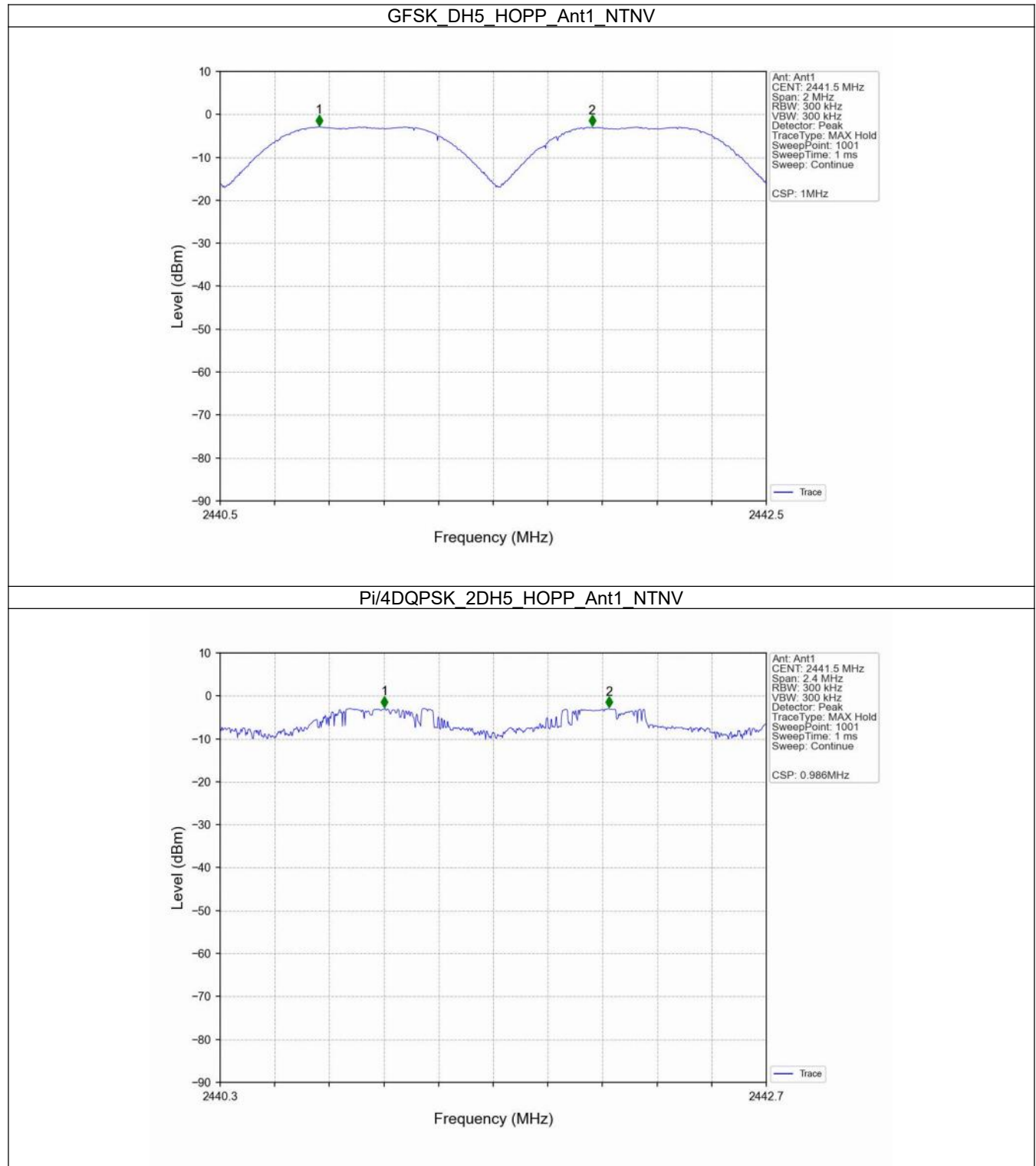
3.1 Test Result

3.1.1 Ant1

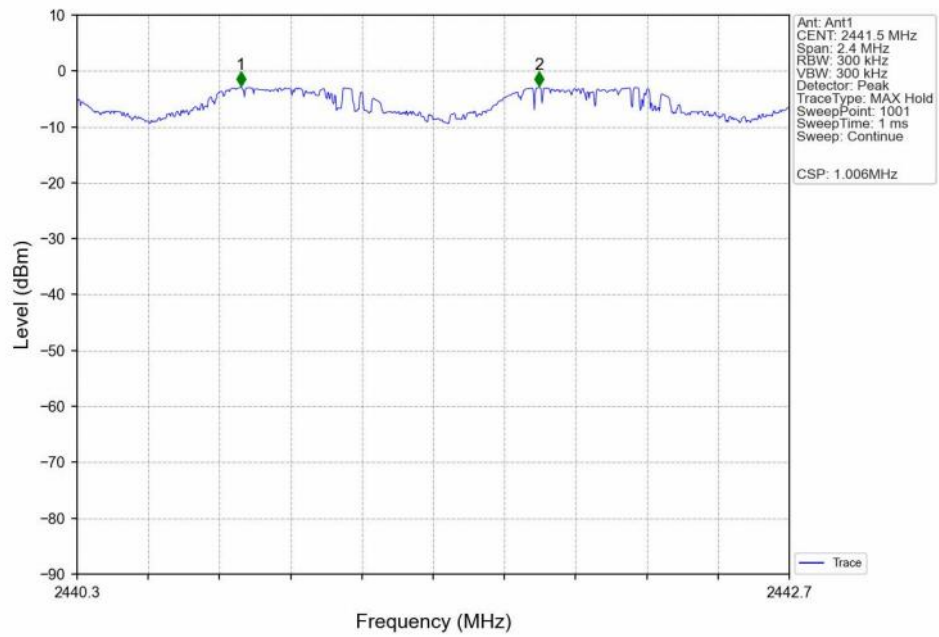
Ant1							
Mode	TX Type	Frequency (MHz)	Packet Type	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limit (MHz)	Verdict
GFSK	SISO	HOPP	DH5	1.000	0.947	≥ 0.947	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	0.986	1.237	≥ 0.825	Pass
8DPSK	SISO	HOPP	3DH5	1.006	1.261	≥ 0.841	Pass

3.2 Test Graph

3.2.1 Ant1



8DPSK_3DH5_HOPP_Ant1_NTNV



4. Number of Hopping Channel Test

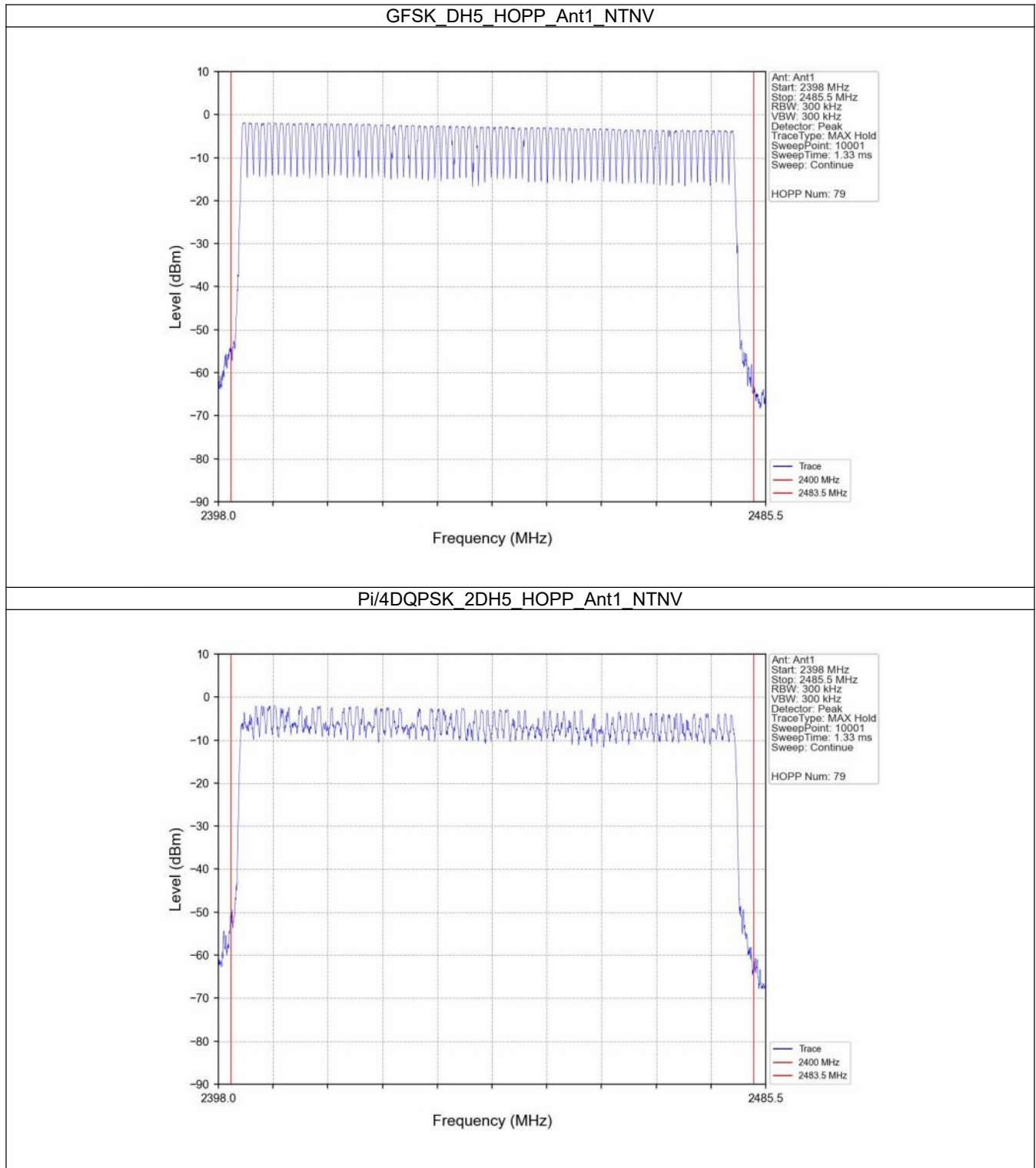
4.1 Test Result

4.1.1 HoppNum

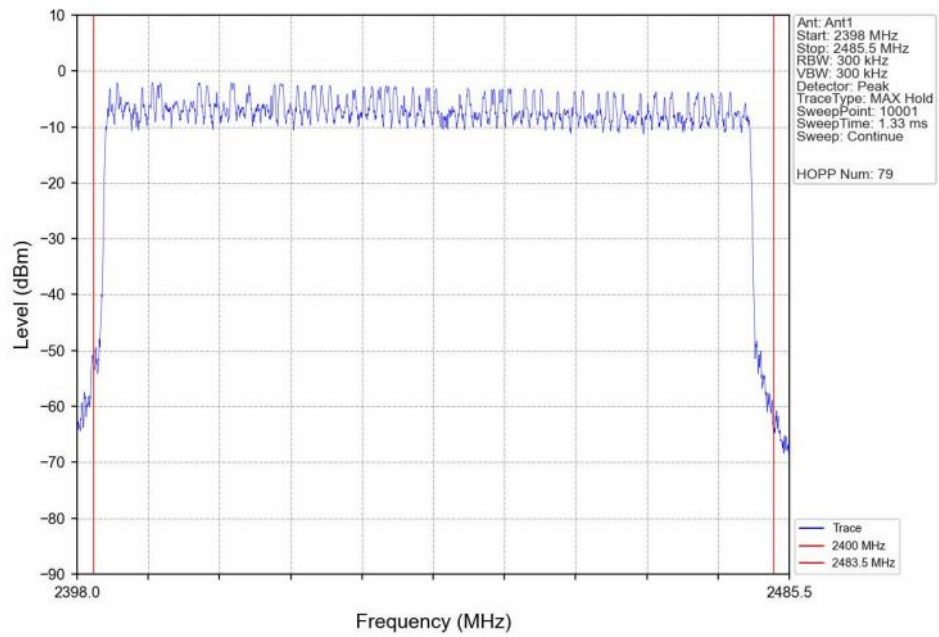
Mode	TX Type	Frequency (MHz)	Packet Type	Num of Hopping Frequencies		Verdict
				ANT1	Limit	
GFSK	SISO	HOPP	DH5	79	>=15	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	79	>=15	Pass
8DPSK	SISO	HOPP	3DH5	79	>=15	Pass

4.2 Test Graph

4.2.1 HoppNum



8DPSK_3DH5_HOPP_Ant1_NTNV



5. Dwell Time Test

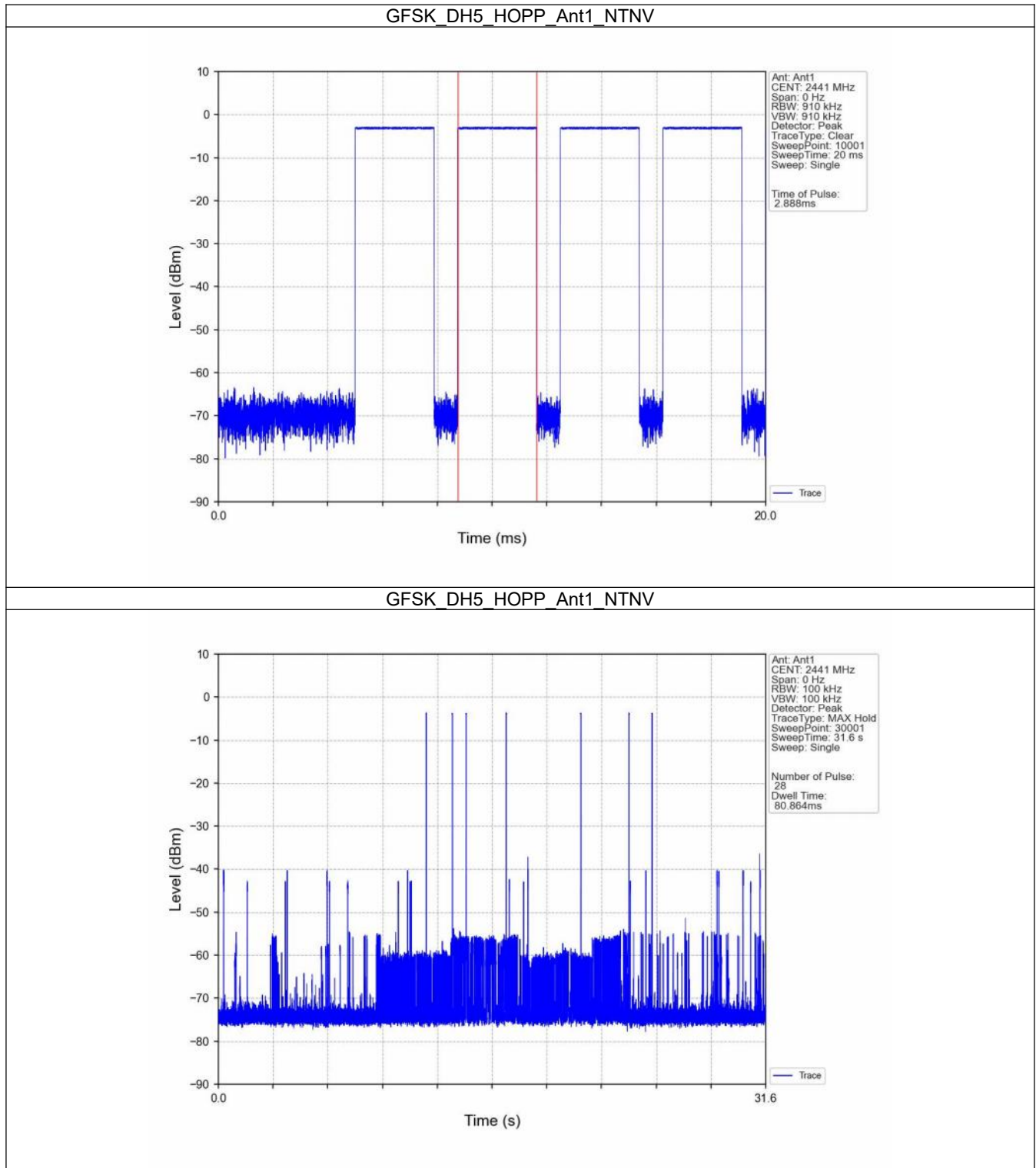
5.1 Test Result

5.1.1 Ant1

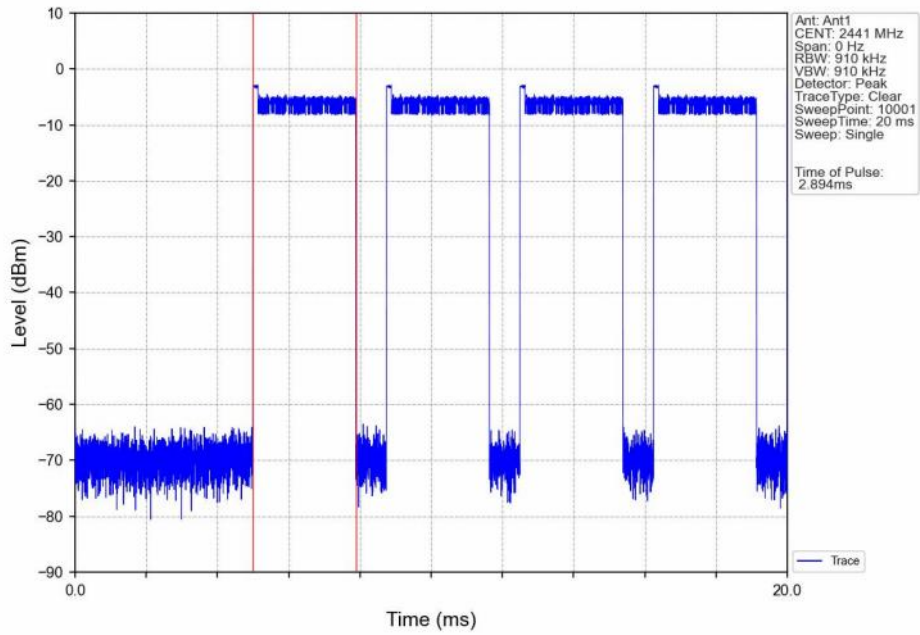
Ant1									
Mode	TX Type	Frequency (MHz)	Packet Type	Duration of Single Pulse (ms)	Observation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limit (ms)	Verdict
GFSK	SISO	HOPP	DH5	2.888	31.600	28	80.864	<=400	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	2.894	31.600	48	138.912	<=400	Pass
8DPSK	SISO	HOPP	3DH5	2.894	31.600	24	69.456	<=400	Pass

5.2 Test Graph

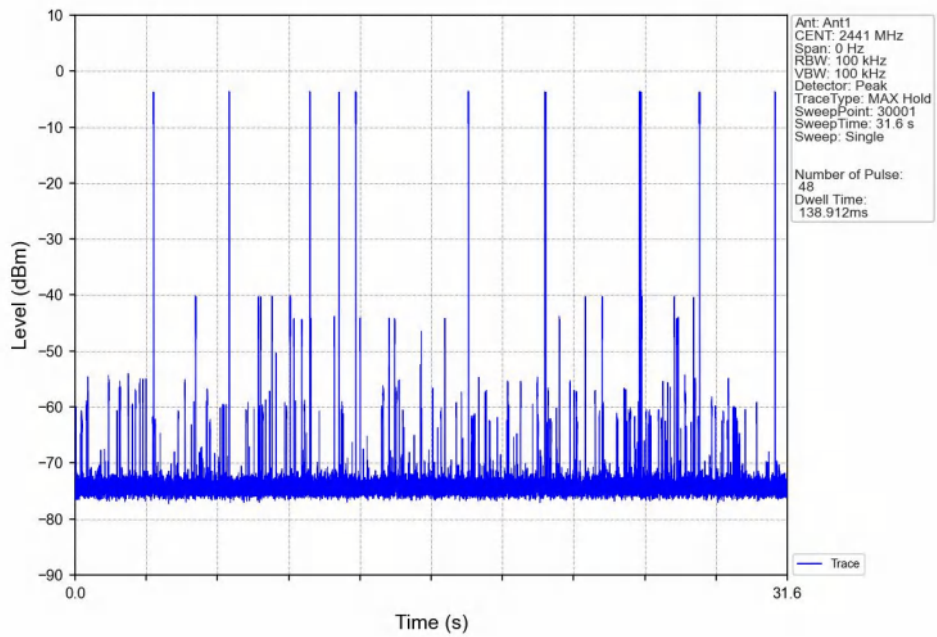
5.2.1 Ant1



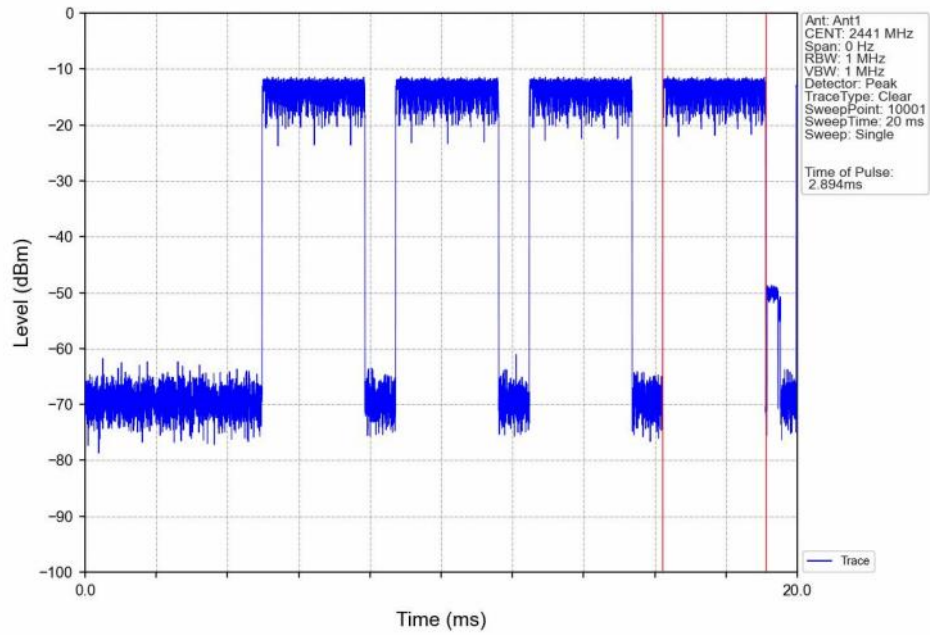
Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



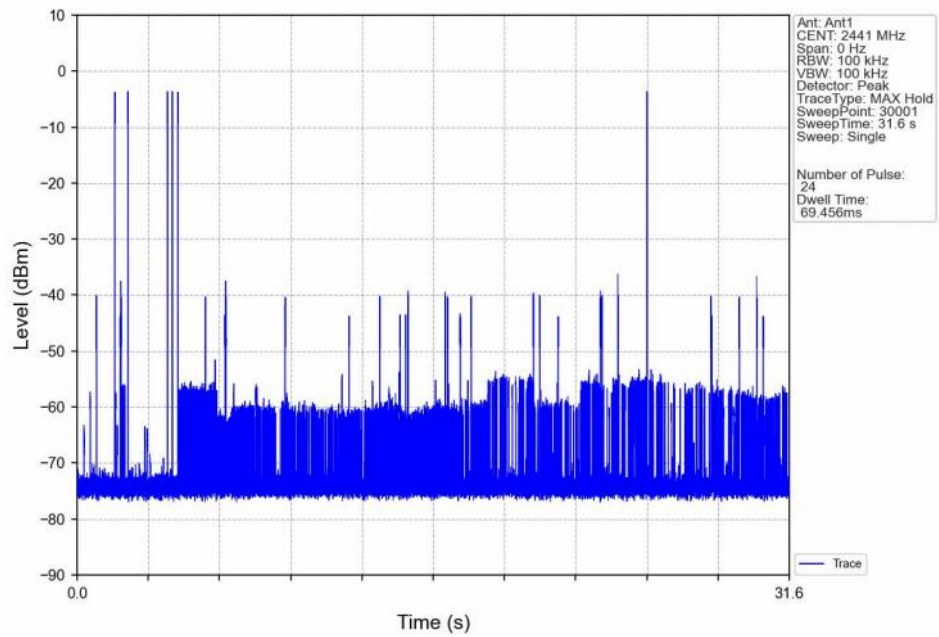
Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



6. Conducted Spurious Emissions and Band Edge Requirement

6.1 Test Result

6.1.1 Ref

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)
GFSK	SISO	2402	DH5	1	-2.35
		2441	DH5	1	-3.25
		2480	DH5	1	-4.16
		HOPP	DH5	1	-2.61
					-2.61
Pi/4DQPSK	SISO	2402	2DH5	1	-2.35
		2441	2DH5	1	-3.23
		2480	2DH5	1	-4.30
		HOPP	2DH5	1	-2.30
					-2.30
8DPSK	SISO	2402	3DH5	1	-2.32
		2441	3DH5	1	-3.29
		2480	3DH5	1	-4.31
		HOPP	3DH5	1	-2.44
					-2.44

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

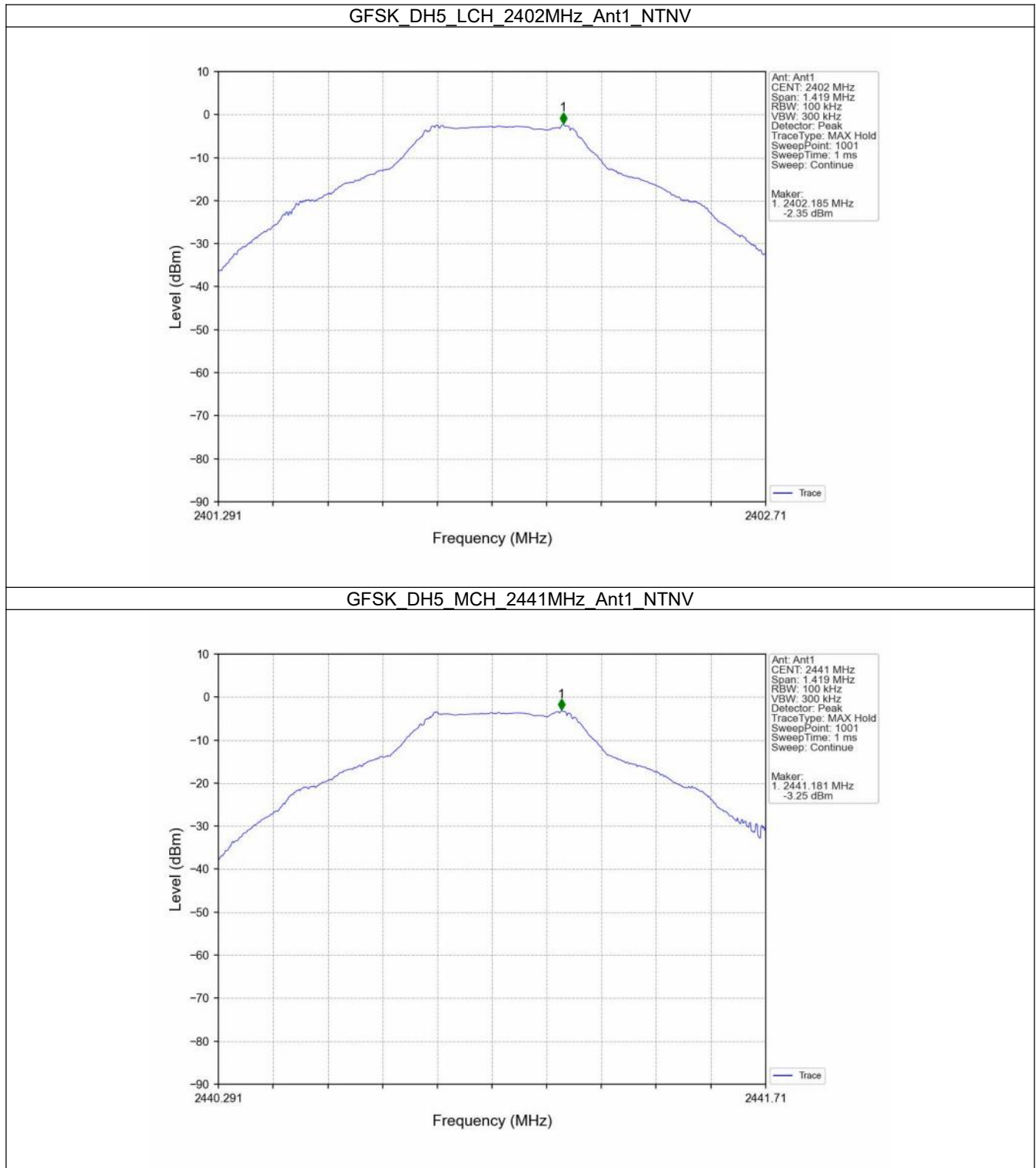
6.1.2 CSE

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2402	DH5	1	-2.35	-22.35	Pass
		2441	DH5	1	-3.25	-23.25	Pass
		2480	DH5	1	-4.16	-24.16	Pass
		HOPP	DH5	1	-2.61	-22.61	Pass
					-2.61	-22.61	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	-2.35	-22.35	Pass
		2441	2DH5	1	-3.23	-23.23	Pass
		2480	2DH5	1	-4.30	-24.30	Pass
		HOPP	2DH5	1	-2.30	-22.30	Pass
					-2.30	-22.30	Pass
8DPSK	SISO	2402	3DH5	1	-2.32	-22.32	Pass
		2441	3DH5	1	-3.29	-23.29	Pass
		2480	3DH5	1	-4.31	-24.31	Pass
		HOPP	3DH5	1	-2.44	-22.44	Pass
					-2.44	-22.44	Pass

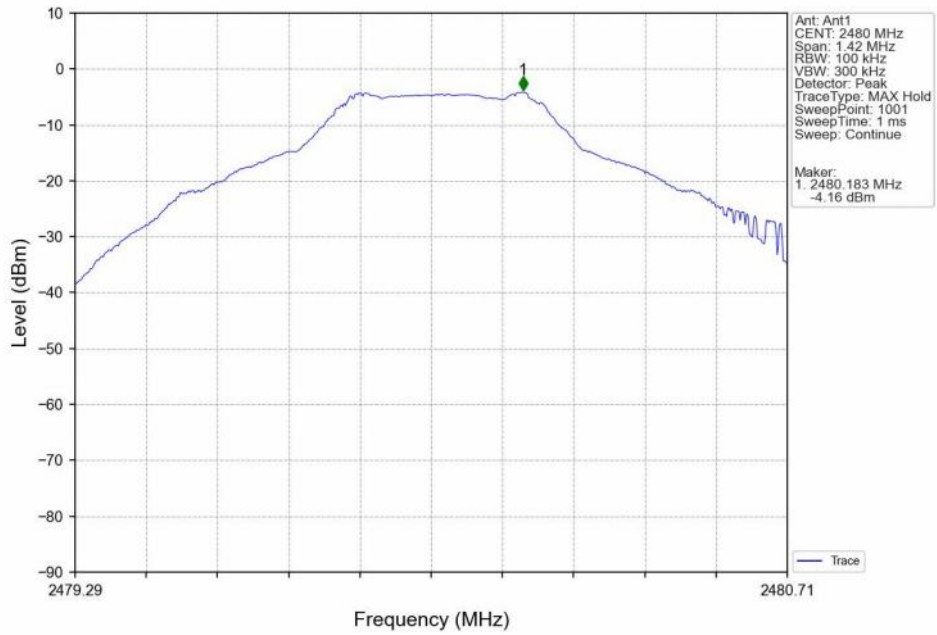
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

6.2 Test Graph

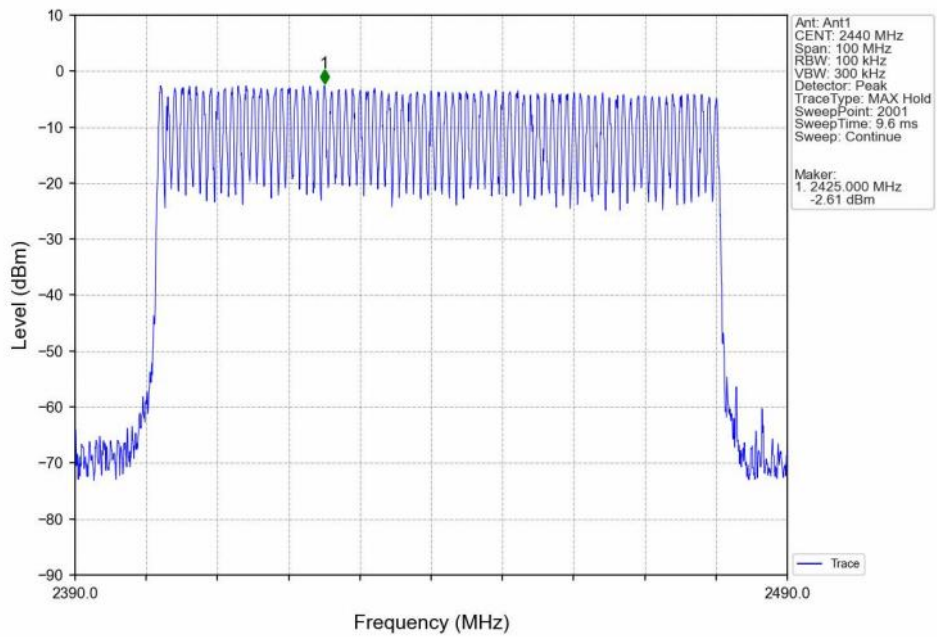
6.2.1 Ref



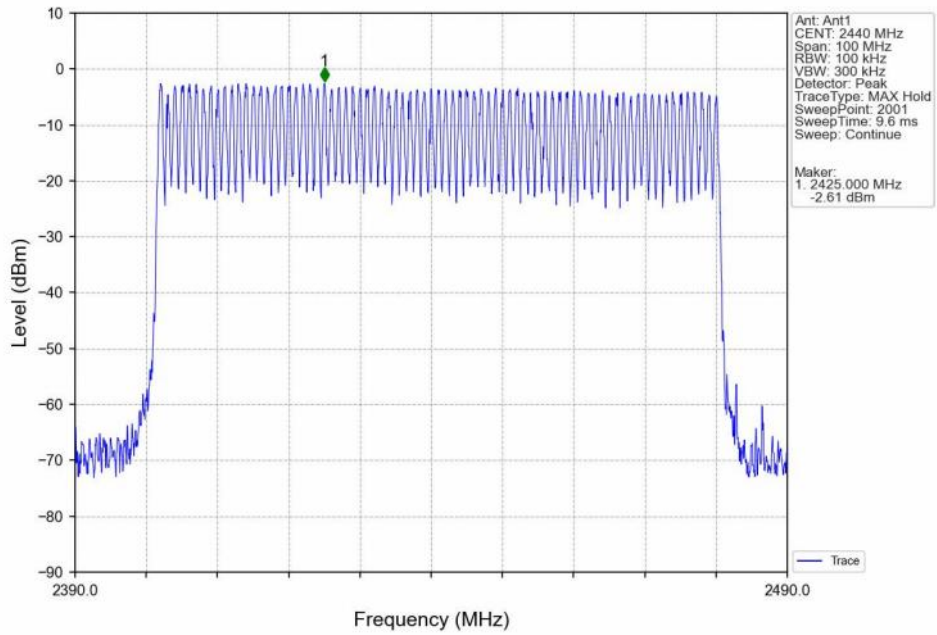
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



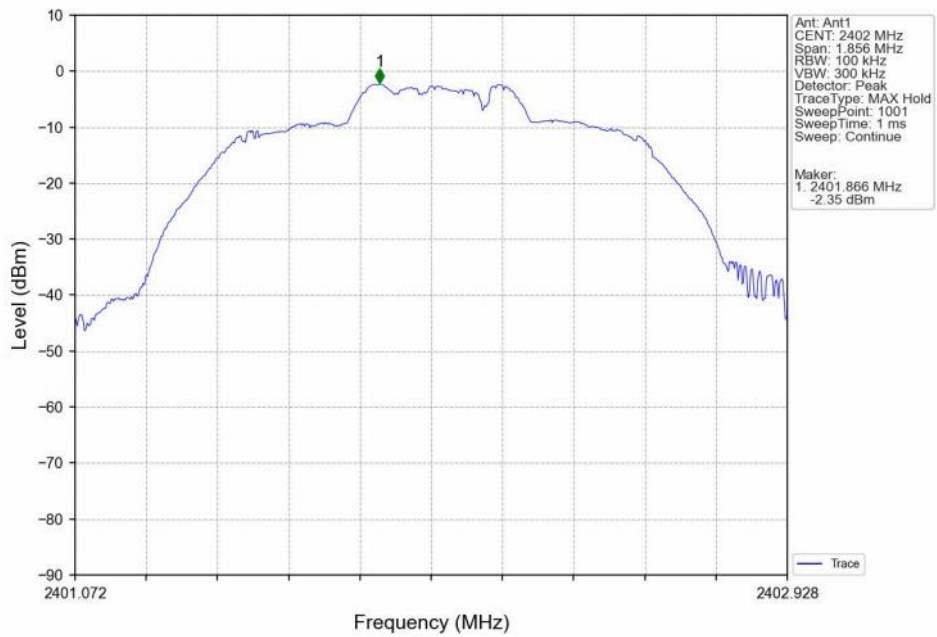
GFSK_DH5_HOPP_Ant1_NTNV



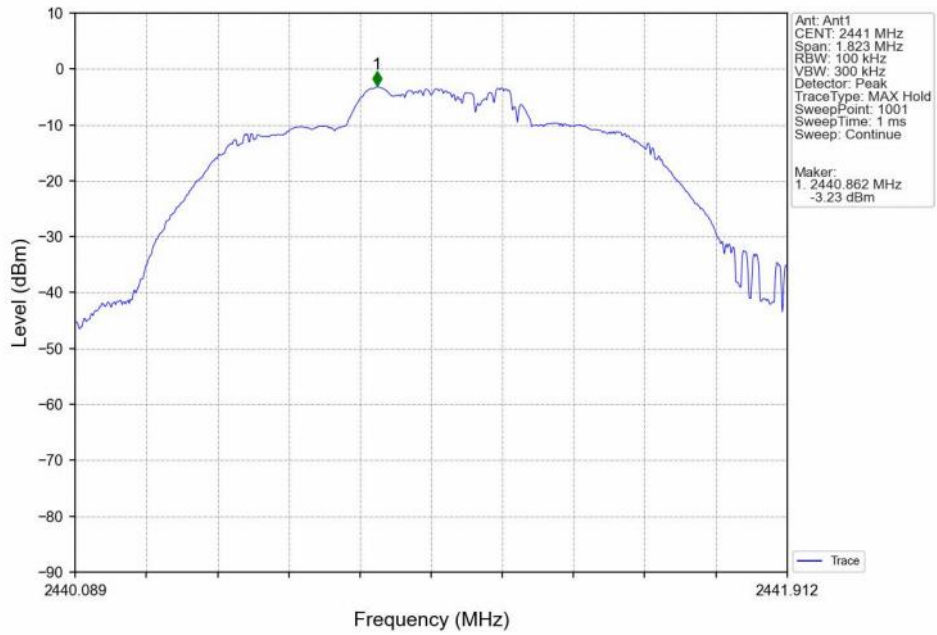
GFSK_DH5_HOPP_Ant1_NTNV



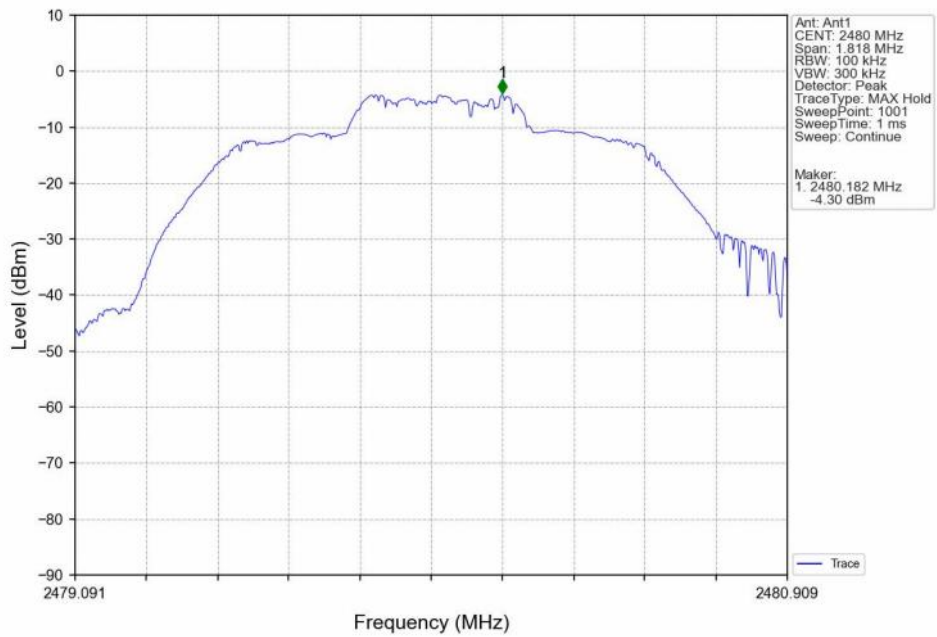
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



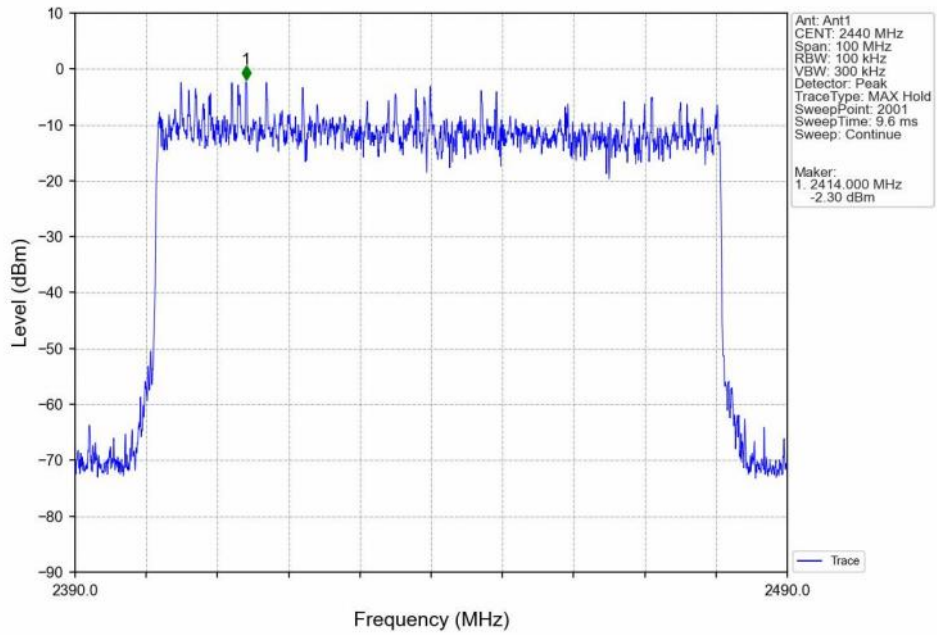
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



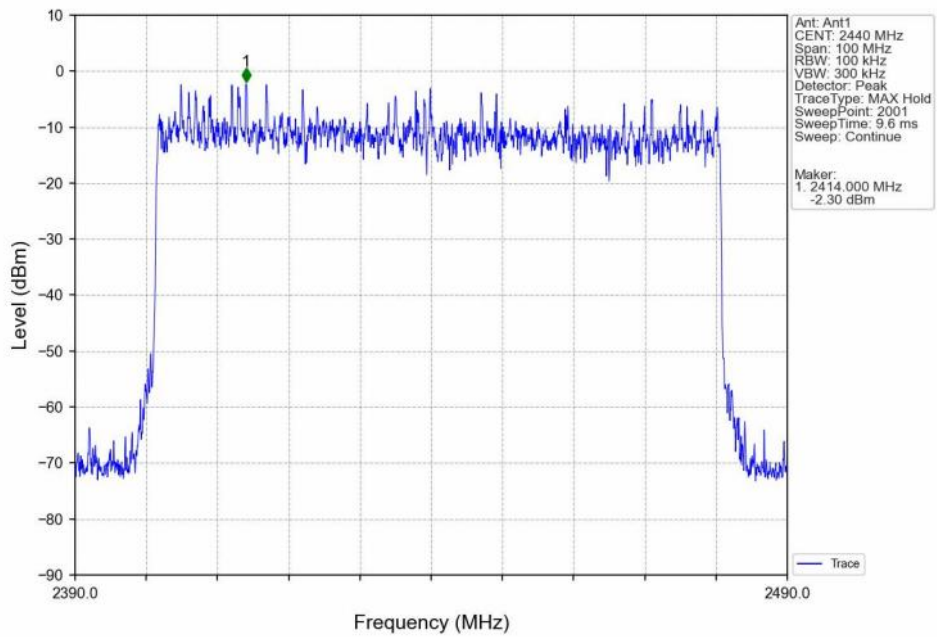
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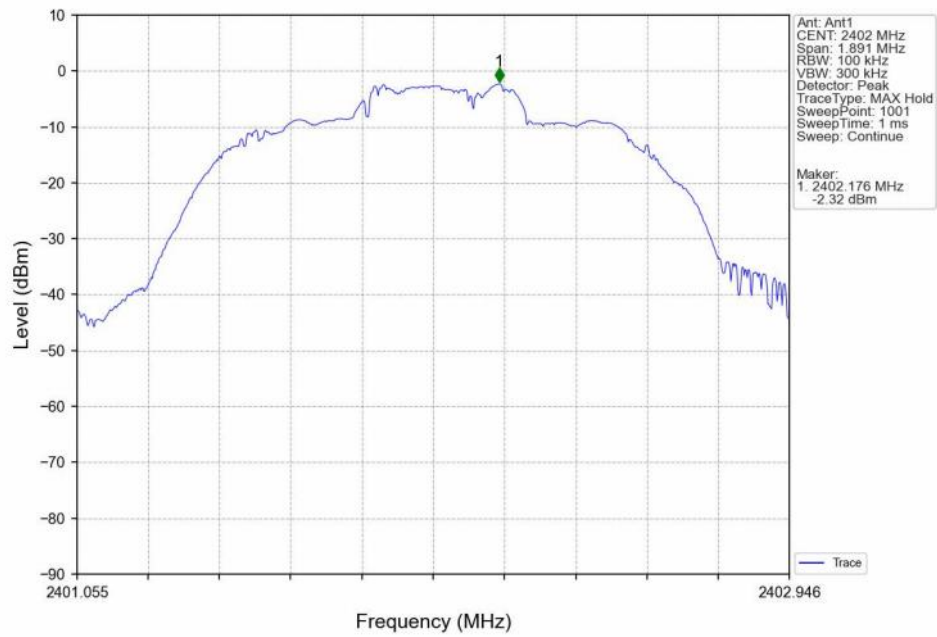
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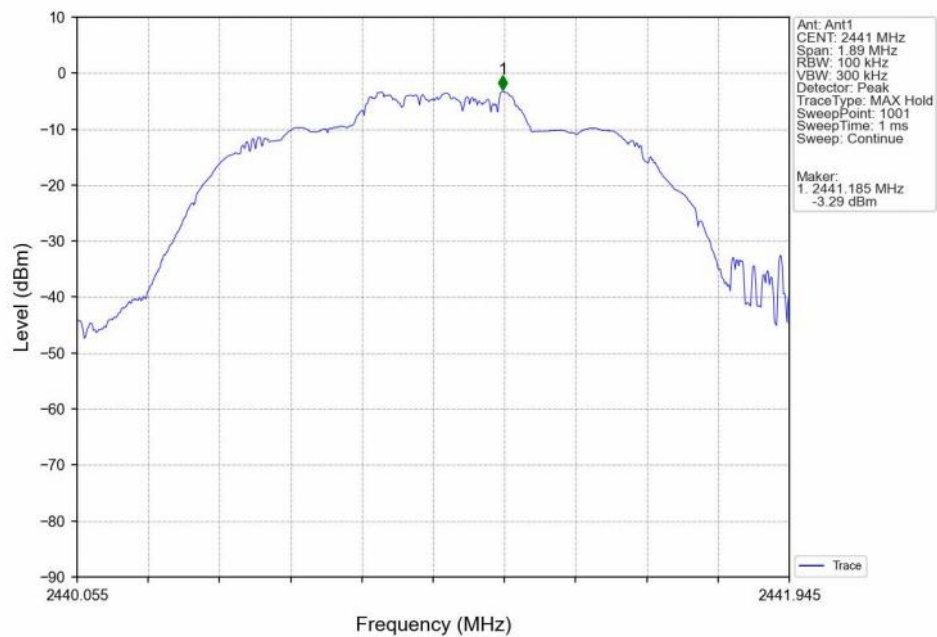
Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



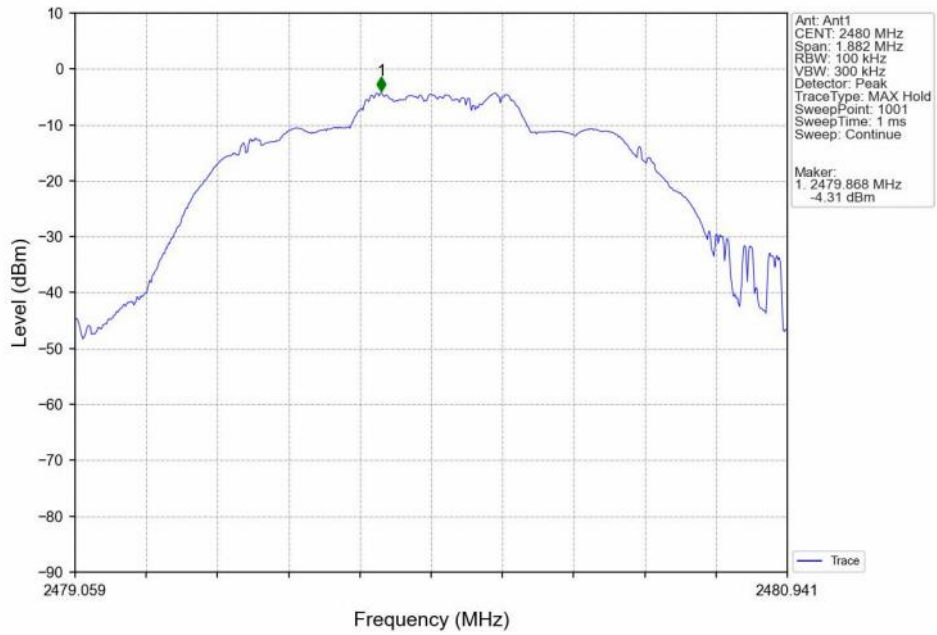
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



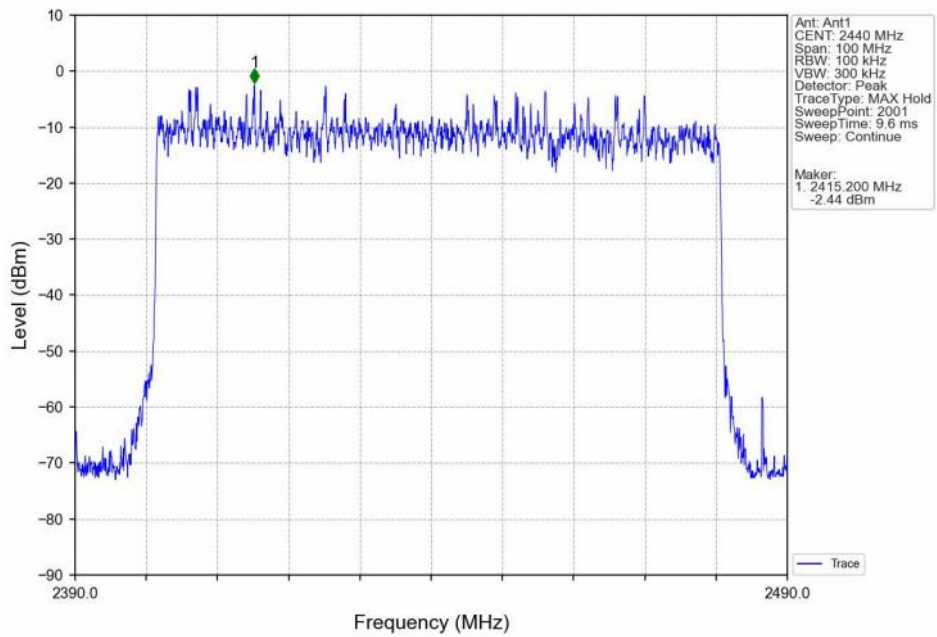
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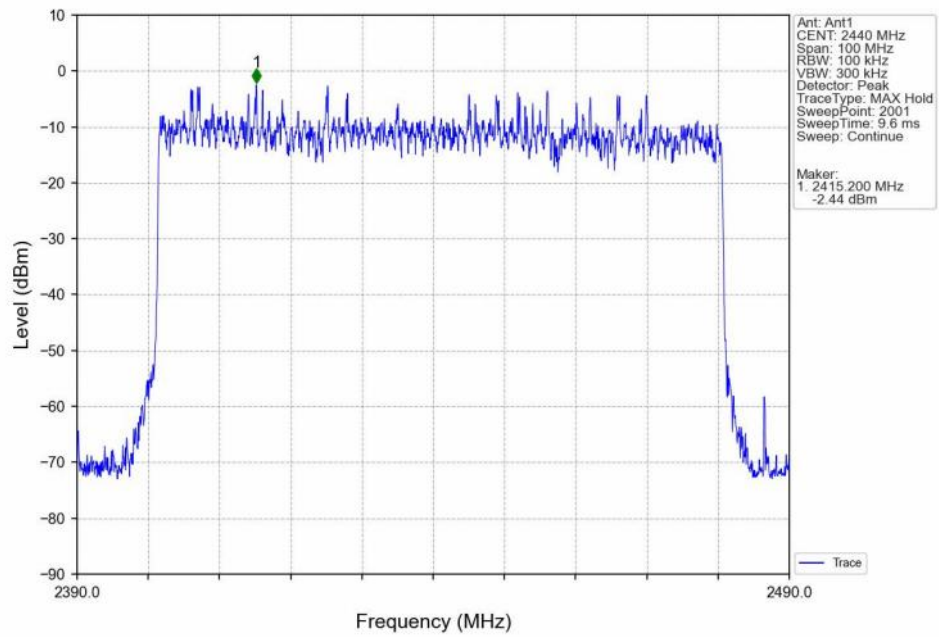
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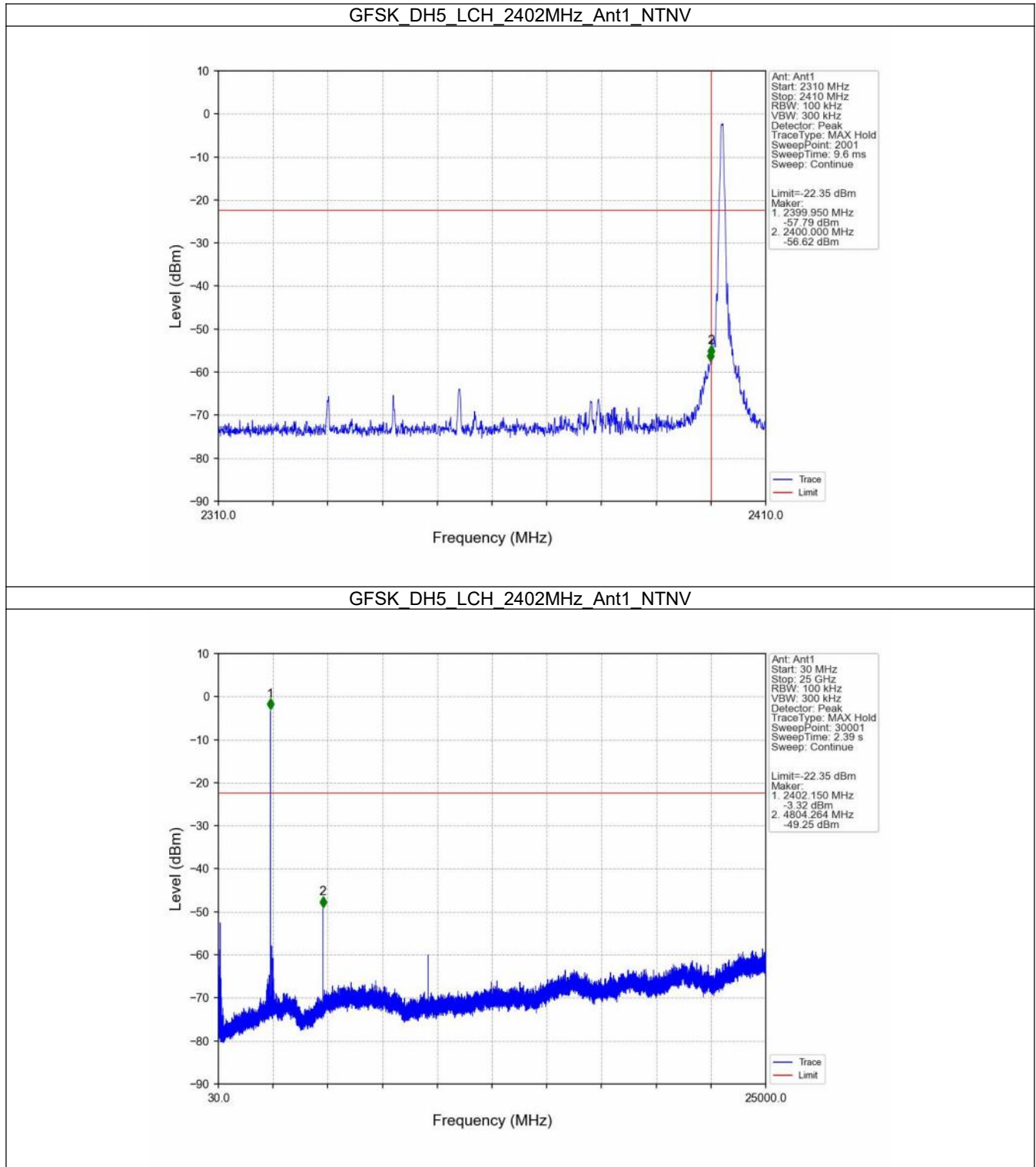
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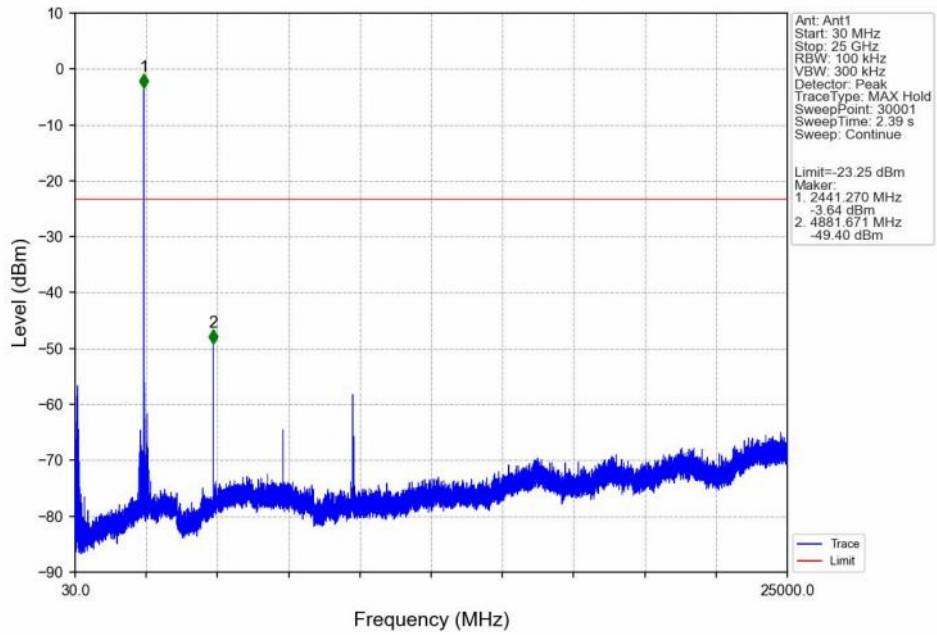
8DPSK_3DH5_HOPP_Ant1_NTNV



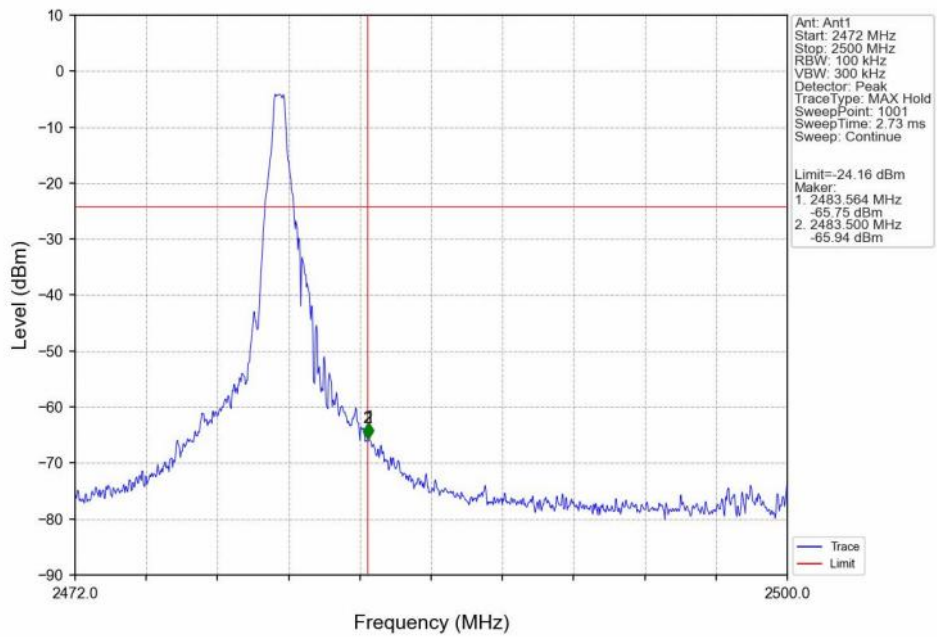
6.2.2 CSE



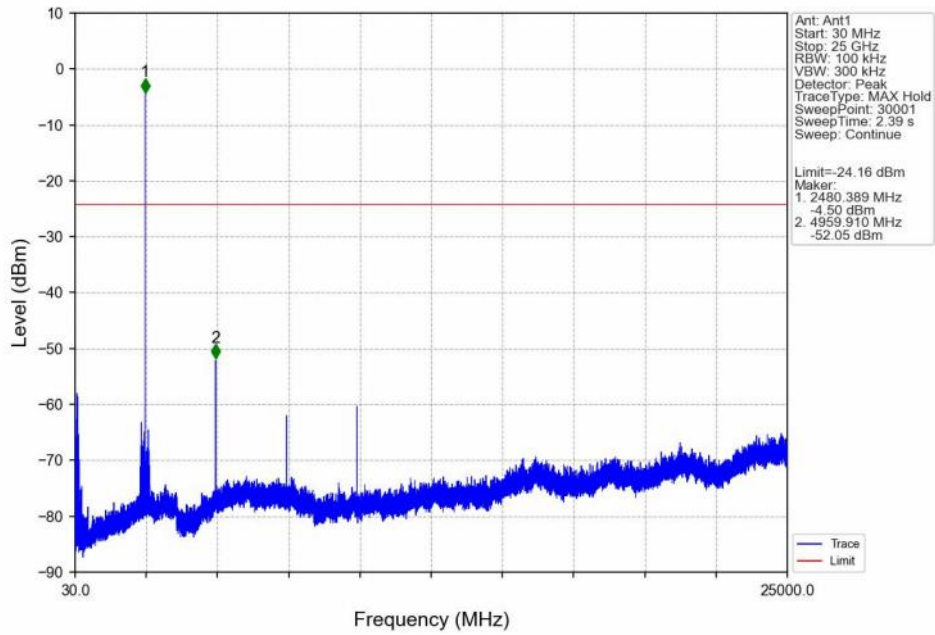
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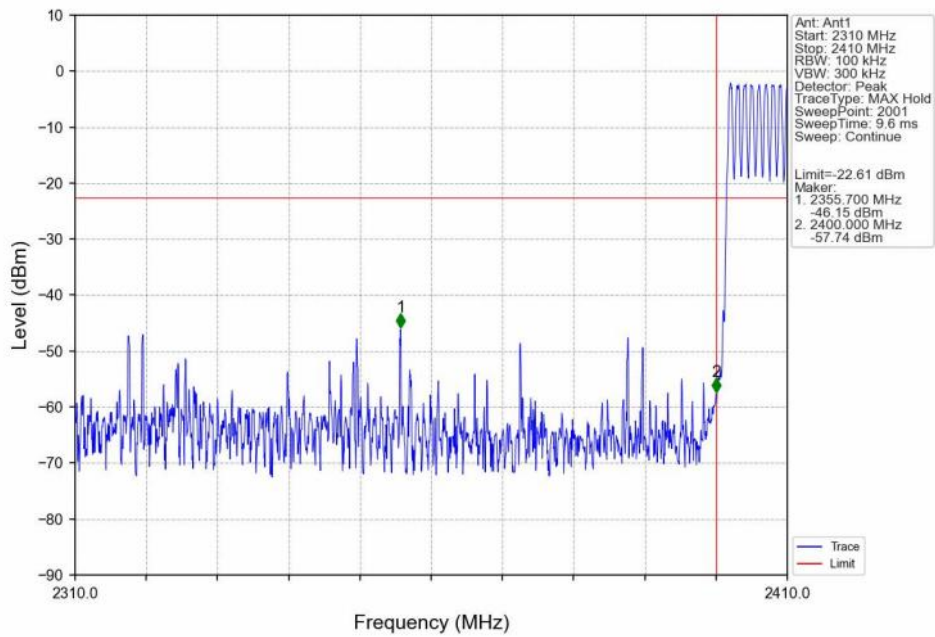
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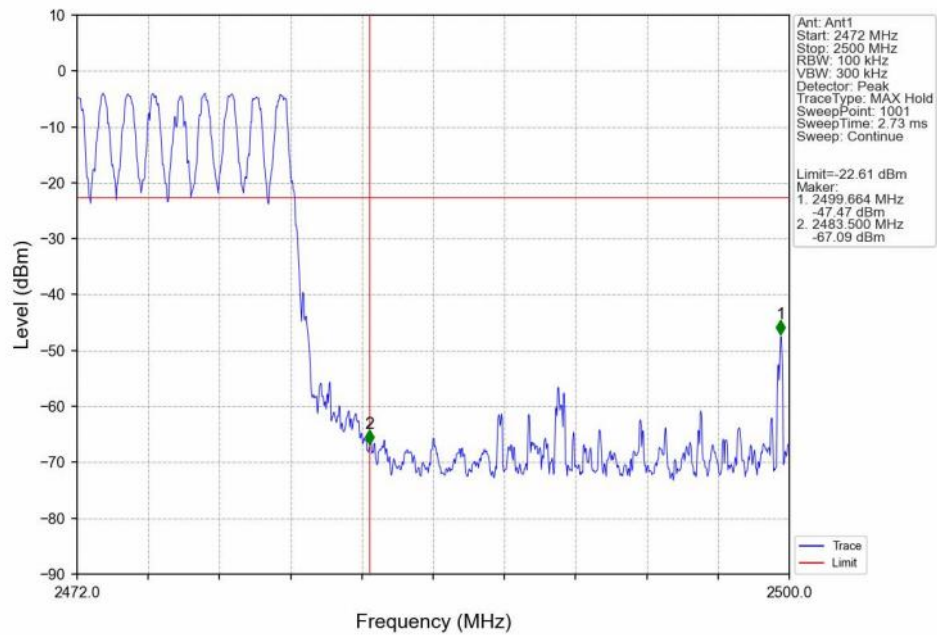
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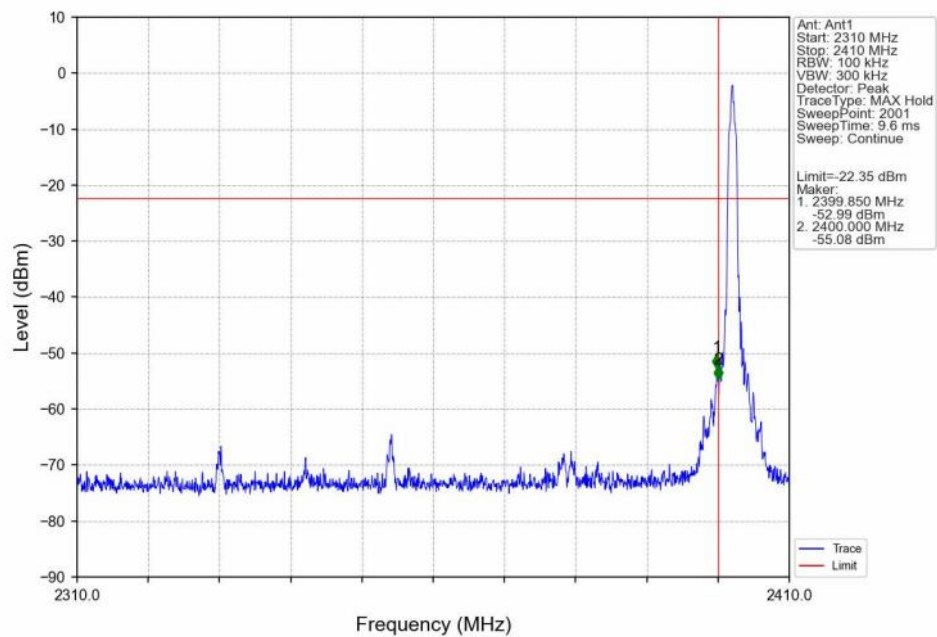
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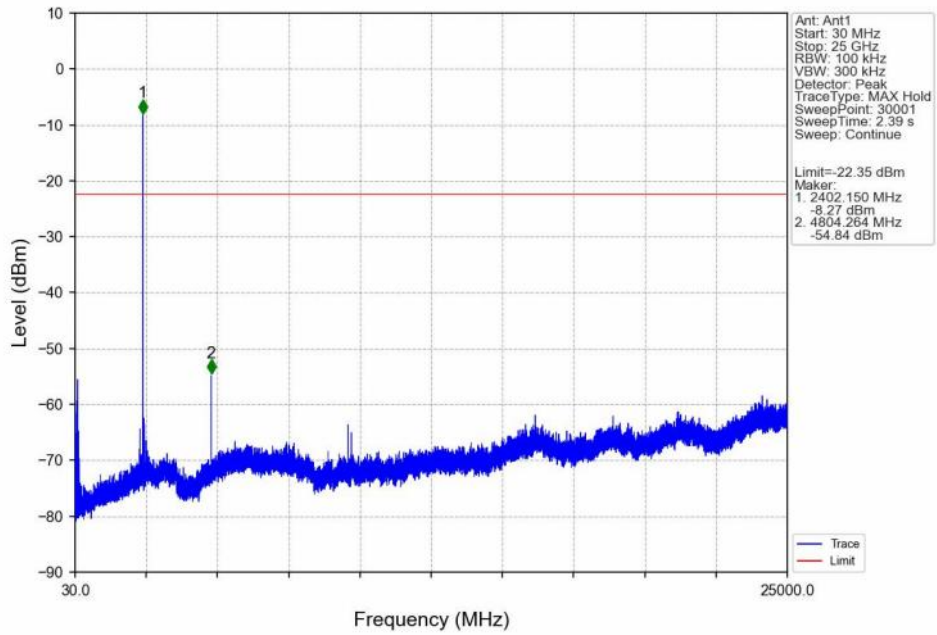
GFSK_DH5_HOPP_Ant1_NTNV



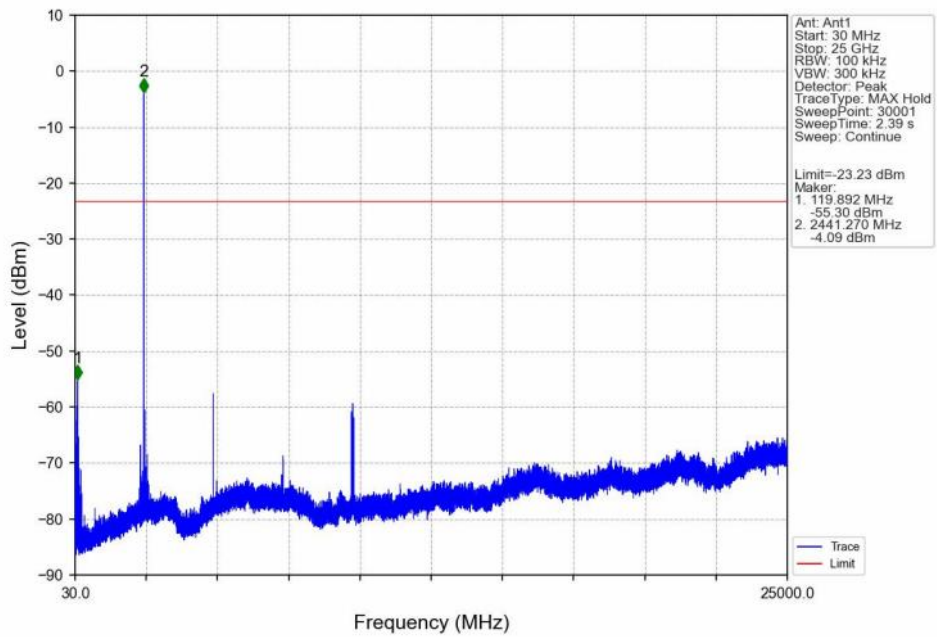
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



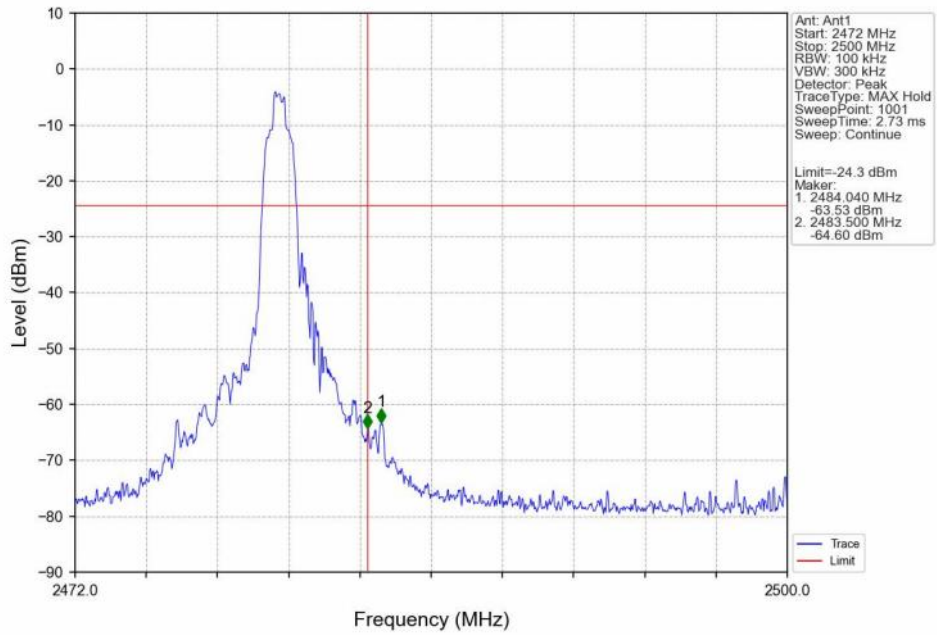
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



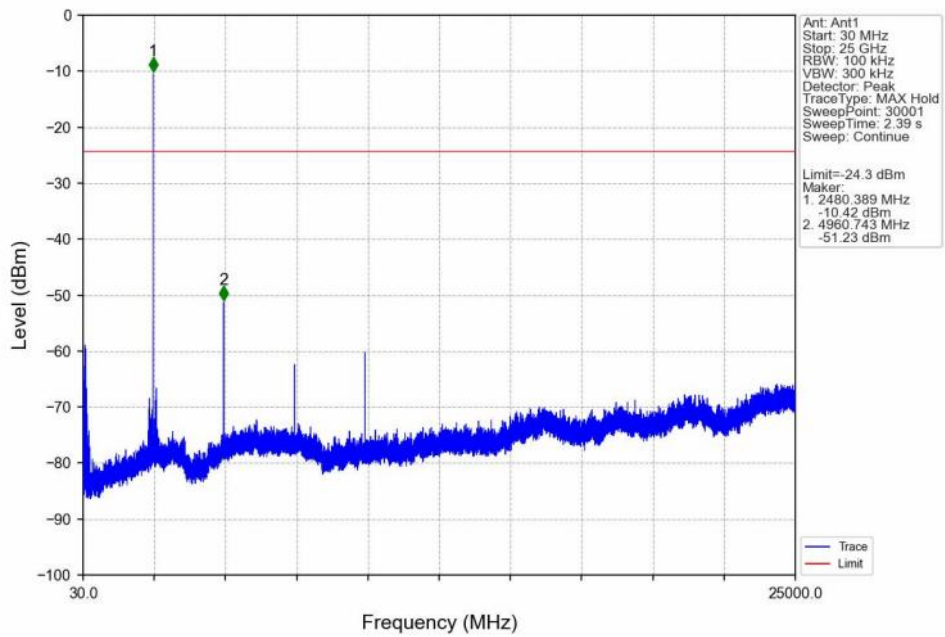
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



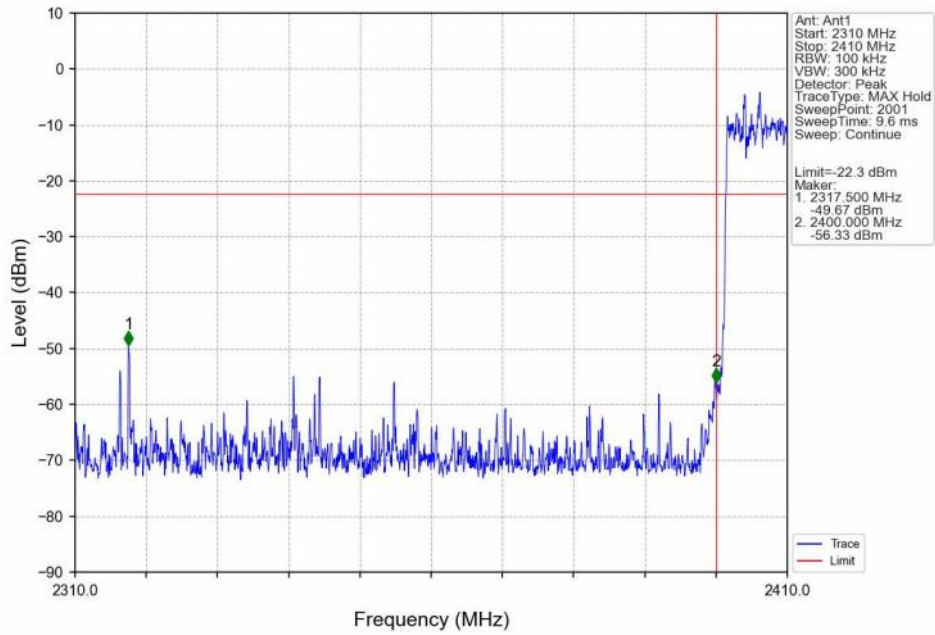
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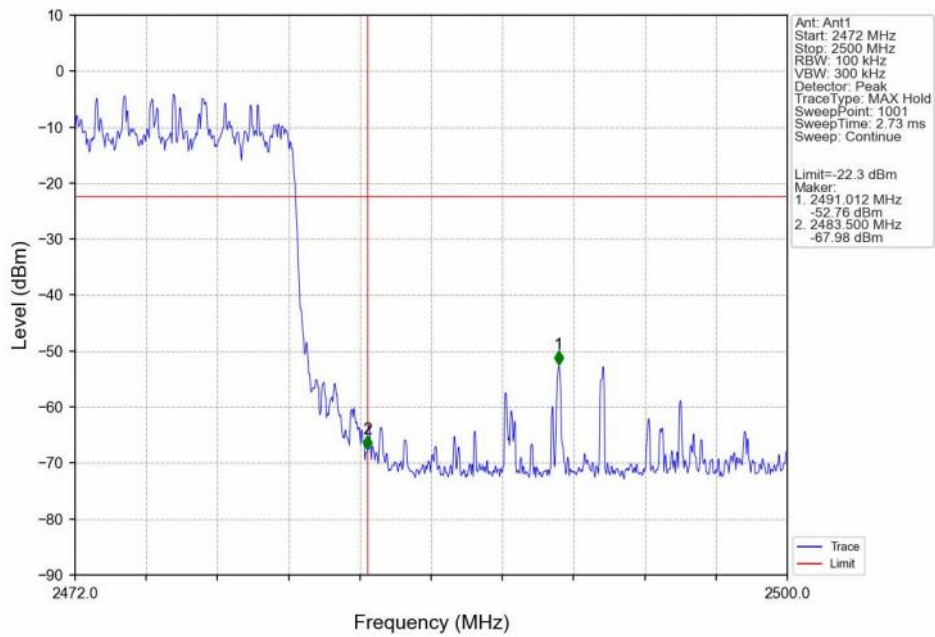
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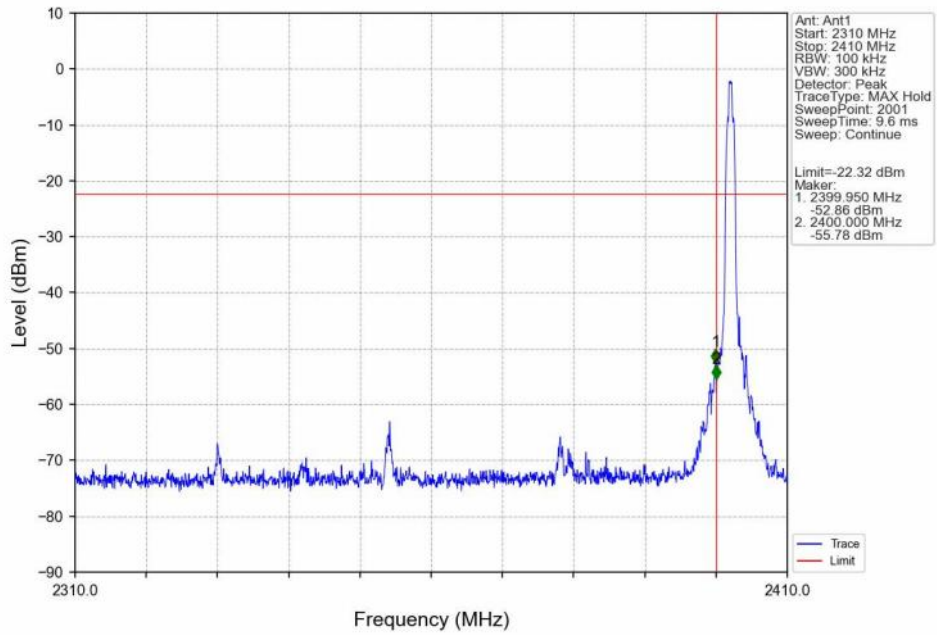
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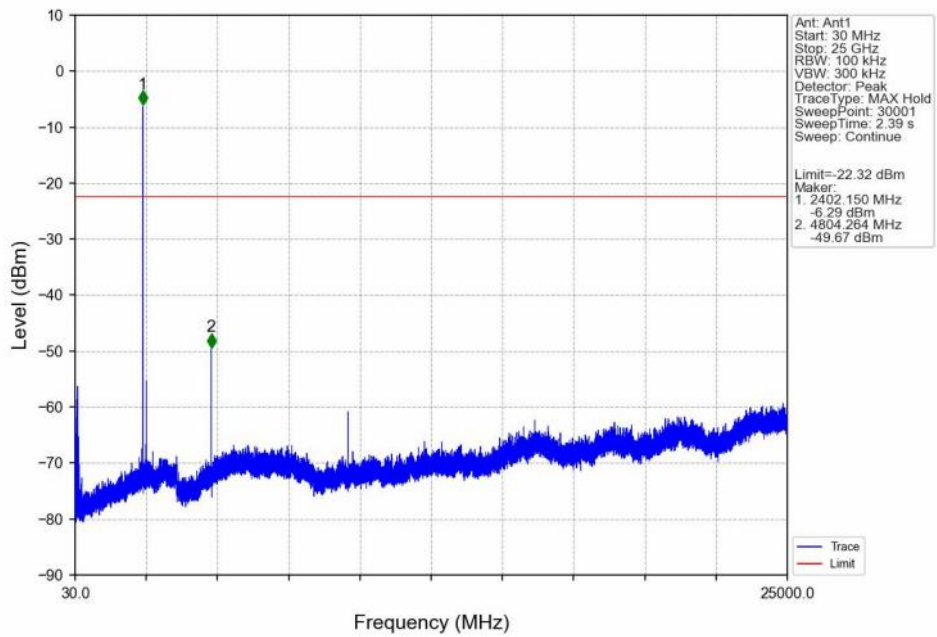
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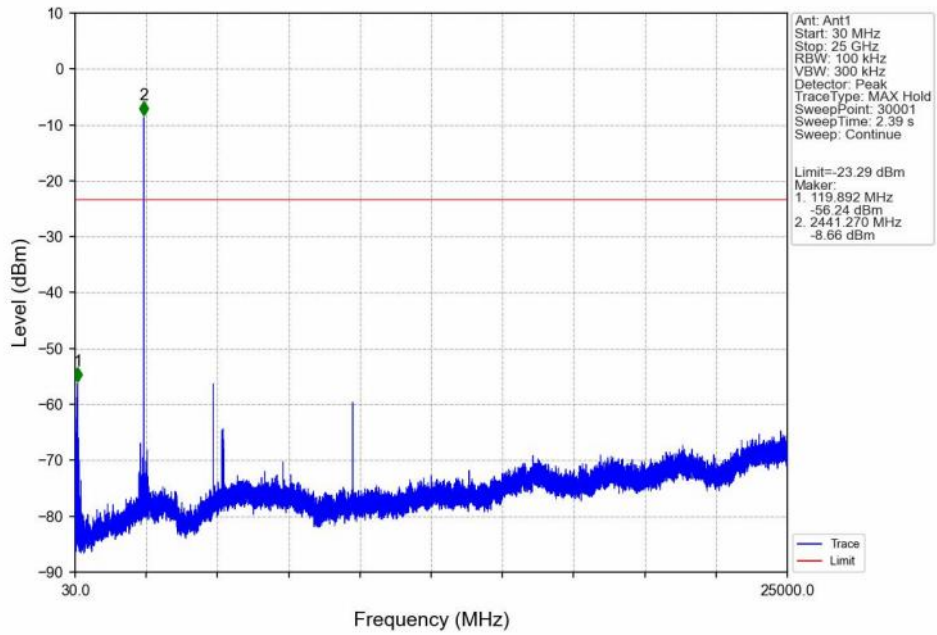
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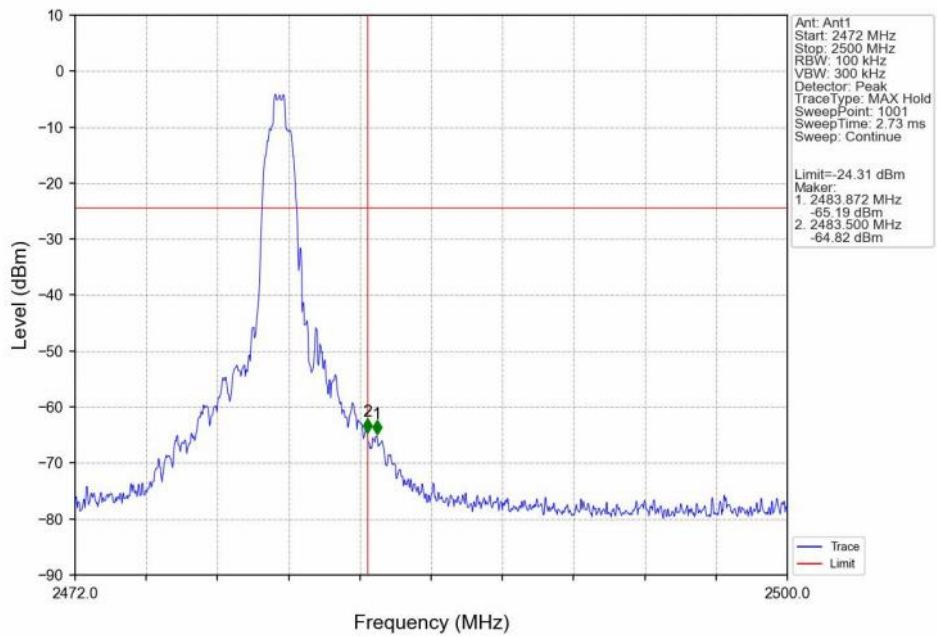
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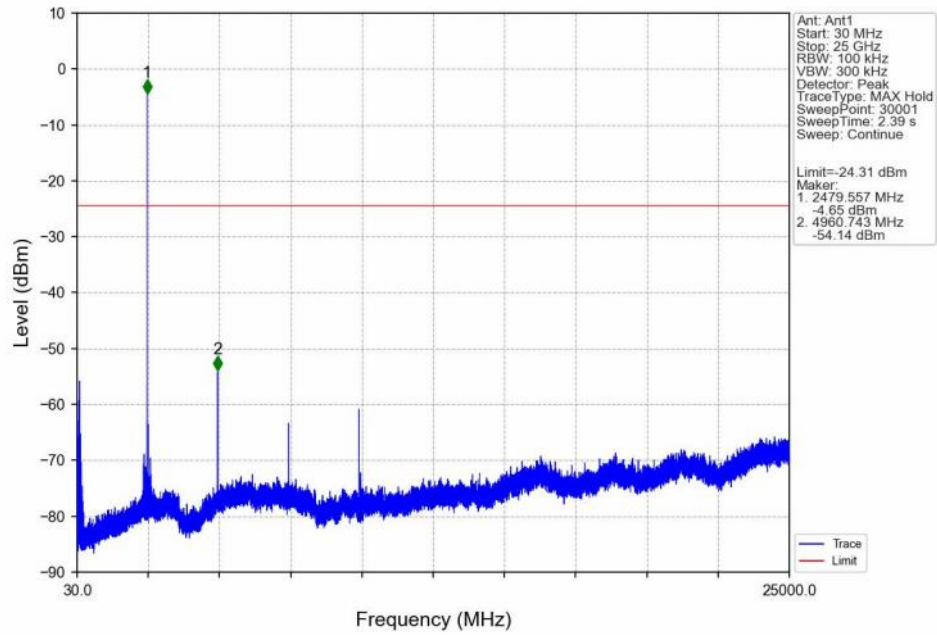
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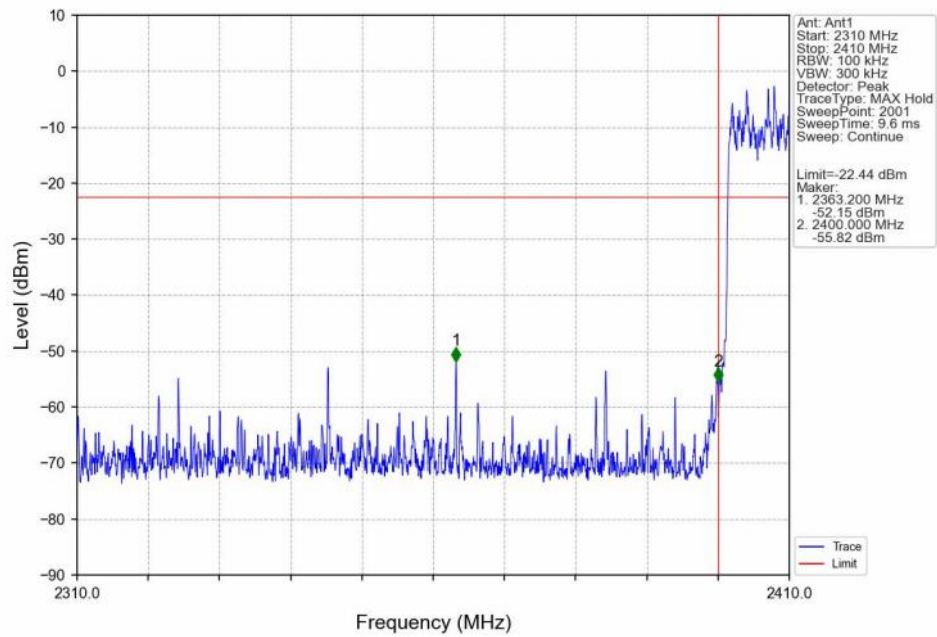
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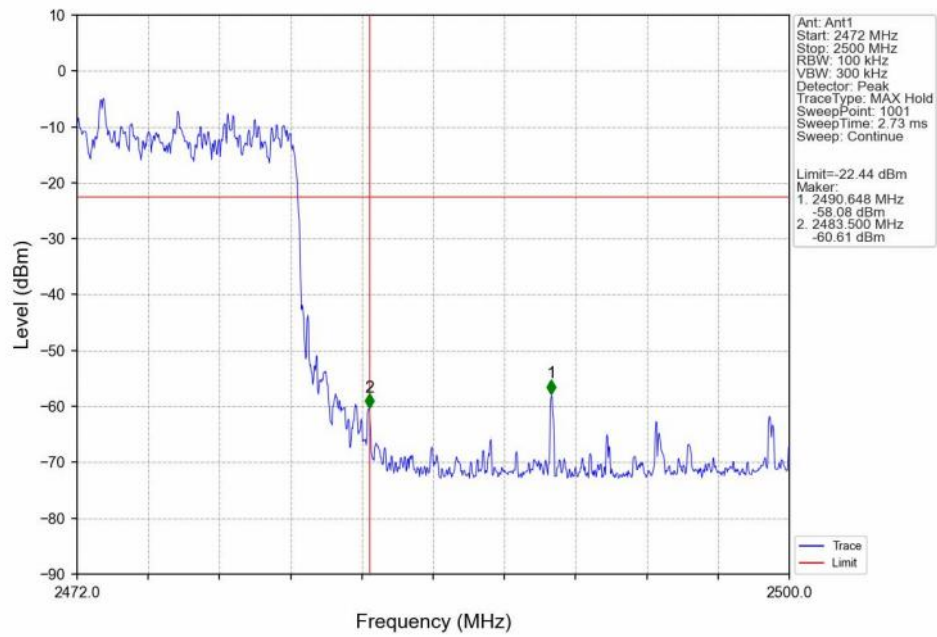
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8DPSK_3DH5_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



----- The End -----